

Google+ Hangouts Report

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Introduction

Google+ Hangouts is a browser based video conferencing system that allows multiple people to communicate and collaborate in real time. The purpose of this usability study is to improve the system by discovering and defining problem areas. This report discusses our methodology, findings and suggestions in order to better and improve the usability of Google+ Hangouts.

Methodology

We completed a usability study to assess Google+ hangouts as a system. Five people in total participated in the study; each participant completed a pre-questionnaire and a post-questionnaire. These surveys were done to assess participants familiarity and experience with Google+ hangouts, as well as their general knowledge of audio or video conferencing systems. After completing the pre-questionnaire, participants were asked to complete a series of predetermined tasks. Participants were observed while they completed these tasks during which they were asked to either use the speak-aloud protocol or the constructive interaction protocol (where a novice and experienced participant were paired and asked to complete the tasks together). One team member presented the tasks to the participant and assisted with any questions they may have had, while the other two team members observed. One of the observers was on the other end of the Google+ hangout to make the experience more realistic. Notes and audio recordings were taken during the usability study while participants interacted with Google+ hangouts.

Participants ages ranged primarily from 16 to 23, however, one participant was in their early 50's. The participants considered themselves to be experienced computer users and all had experience with either audio or video chat programs prior to using Google+ hangout. However, only one of the participants had used Google+ before.

Task 1: You want to start a Google+ hangout and invite your friend [Insert name] so you can start a video chat. Locate Google+ Hangout and start a hangout.

Task 2: You're not sure if your microphone and camera are working correctly, check that your microphone and camera are on and functioning.

Task 3: Another friend of yours wants to join your Google+ Hangout, invite them to your existing hangout.

Task 4: Share your screen with the person you are chatting with to show them your desktop background.

Task 5a: You want to share this youtube video: "Oreo Smoothie Recipe by Rebecca Brand"

<http://www.youtube.com/watch?v=9yxDzm-EYHc&feature=g-feat>, post the link in the chat bar.

Task 5b: Your friend wants to watch the video together, watch the video together through Google+ Hangout.

Task 6: You should be working on a project, share a google doc with your friend in Google+ Hangout.

Task 7: You want to just have a little fun and play with an app together, find an app that interests you and install it.

Task 8: Focus back on the video chat and say goodbye to your friend.

Observations

Participant 1

Pre-Questionnaire: Participant one considered themselves to be an experienced computer user and had used audio and video chat features before. They had never used Google+ hangout before but used similar programs such as skype and msn. When asked what they do with the programs, participant one commented that they used them for communicating over long distances and ideating for projects. This was usually once a month.

Task 1: Participant one clicked right on +[Facilitator name] to access Google+ from the Google homepage. During the user study, they commented that they recognized that they were in Google+ because of the amount of plus symbols visible to them. Once the participant accessed Google+, they struggled locating Google+ hangout. They were asked to start a hangout with a [facilitator] acting as a “friend.” Instead of starting a hangout, a chat (conversation) with a [facilitator] was started. When asked to start a hangout, participant one commented “I have no idea what a hangout means.” Eventually, they did manage to start a Google+ hangout after hovering over different icons, they found a tool tip that said hangout and clicked that.

Task 2: Participant one located camera and microphone information quickly. They noted the top right corner where the camera and microphone icons were. They knew their camera was functioning correctly, because the camera icon had the words “on.” Also, they noticed when they clicked on the icon, that their camera was turned off when the little window on the bottom of the screen would turn black. Participant one also noticed the feedback for the microphone, noting the green bar that would adjust as they spoke. They also muted and unmuted the microphone to test that it was working.

Task 3: The invite button was found quickly and efficiently. The task was completed successfully with no issues.

Participant one comment: “At first glance on the screen, I see that there is a invite button on the left side. I will click on it and search for a friend to join the hangout, and then the friend should automatically reply to the conversation.”

Task 4: The share screen button was located quickly near the invite button. However, there was some confusion between “desktop” and “desktop background.” Once screen sharing was enabled, participant one was not sure if it had started and thought the microphone indicator under participant one’s video screen was a loading bar. The little window displayed looked a lot like their original projection because it was full screened.

Task 5: a) Participant one was quick to locate the chat window and copy the youtube link.

Participant one comment: "In the top left corner, I can see it next to the invite and screen share button, I see a chat button. I click on that and typed it in and pressed enter. [The facilitator] should be able to see the link."

Task 5: b) When it came to sharing the youtube video, this proved to be more difficult for participant one. They did locate the youtube app quickly however had difficulties playing the video. A pop up appeared when the app opened and the participant commented that "I am too lazy to read the text" and proceeded to click "ok." Once inside the app, they focused on the video area enlarging and shrinking the window, before clicking the "Add to playlist" button. Participant one spent a lot of time scanning the window and not clicking on anything before finding the correct button. Participant one wasn't initially sure if they could add a url to the search field and proceeded to press enter. The video played successfully.

Task 6: This task was completed successfully by participant one. They opened and closed the Google doc easily. They also, stopped screen sharing by pressing screen share.

Task 7: The "add app" function on the top of the screen was clicked. Participant one hovered over the app before selecting it to install, and noticed that when they hovered their mouse over the app that it said "add this to my hangout."

Task 8: Instead of focusing on the video to say goodbye, participant one used the app to say goodbye to their friend and exited Google+ hangouts.

Post-questionnaire:

Participant 1 found most of the tasks to be "relatively easy to complete" thanks to "clearly labeled buttons", however they found sharing a Youtube video to be difficult, stating "the function was not explicit enough". Also the participant found it weird that the webcam image of their friend was displayed twice in the window. Overall they would recommend Google+ Hangouts because "it is a great way to share information, work on projects or simply have fun".

Participant 2:

Pre questionnaire:

Participant 2 had more experience with video conferencing systems compared to the other participants; they reported using systems like Skype, Facetime, Google+ Hangouts and Google chat multiple times a week. These systems enables them to connect with friends and to maintain a long distance relationship. They "rarely" used Google+, but described it as way to instantly stream content with two or more specific people.

Task 1:

Participant 2 had difficulty locating the button to launch a hangout. They started by looking under the "more" menu at the top of the Google homepage. Unable to find a hangout option, they then clicked on the account profile icon at the top right of the page and selected "view profile". Although they were on the profile page for five to ten seconds reading out snippets of text on the page, they missed the "start a hangout" button at the top right of the page above the chat area. Instead they hovered over the 'more' menu option on the left hand side of the page and selected 'hangouts'. They expressed frustration at once again being unable to find a way to launch a

hangout. Eventually they found one of the buttons and said "Oh, start a hangout! It's in bright red I don't know how I missed it." Although they initially forgot to name the hangout, they quickly corrected the error once inside the chat window.

Task 2:

This participant quickly found the 'gear' icon and was able to mute the mic and turn the camera on/off without any problems.

Task 3:

Finding the invite button straight away, Participant 2 easily located and added their friend to the hangout.

Task 4:

Participant 2 immediately located the screen share option seeing it was "on the top left, so [they] clicked it and proceeded to choose what kind of screen [they] want to show." After selecting the 'desktop' window to share, they were surprised that they "selected the window, except right now [they are] seeing the friend" instead of their desktop, so "I guess I'd have to minimize everything" in order to complete the task. Afterwards the participant successfully exited the screen share by deselecting the screen share menu option.

Task 5:

The participant first went to the Youtube application and upon clarification found the chat, pasting the link without trouble. They then returned to the Youtube tab for the second part of the task, but were "lost" as "there's no search button". After "trying to click every button" on the page using their left and right mouse buttons, they expressed disdain upon discovering that they "have to add it to [their] playlist before [they] can actually see it". Initially clicking on the video's title, the participant quickly identified the plus icon as the correct way to add a video to the queue.

Task 6:

Participant 2 shared the google doc, but "did not know about this option"; they liked that they could "both video chat and work on a paper the same time".

Task 7:

Participant 2 "didn't know that [Google+ hangouts] had games". They were disappointed that "there aren't very many options" and had trouble finding and selecting a game to play as most applications "don't even look like games".

Task 8:

Said goodbye to their friend and closed the hangout using the 'x' button in the top left corner of the window.

Post questionnaire:

This study highlighted many features of Google+ Hangouts that the participant was previously unaware of. They thought starting the hangout and sharing a video on the youtube application were the hardest tasks to complete. Opening and closing applications was the easiest task in their opinion, but they found the number of features could be overwhelming at times.

Participant 3

Prequestionnaire:

Participant 3 uses Skype and Facetime multiple times a week to collaborate with peers on assignments and to keep in touch with friends and family. They have not used Google+ Hangouts

before, but knew that it was some "sort of video chat service".

Task 1: Participant 3 took longer locating Google+ hangouts than the rest of the participants. They tried multiple ways of locating Google+. Participant 3 clicked on the "more" button on top of the Google homepage but did not find Google+. Because they didn't find Google+ they used the Google homepage search field to search for Google+ hangouts and clicked on the top result. The link took them to a Google+ page but asked them to install the Google+ hangout plugin which the participant thought was not right. He went back and eventually found a link that corresponded with Google+. Once in Google+ participant 3 successfully found "start a hangout" on the far right. He proceeded to name the hangout and added a "friend" [a facilitator].

Task 2: When initially launched, there was an error with the camera, it was not working correctly and the window was displaying an image instead of video. Participant 3 noticed the "on" words for the camera but did not see the camera working. Also, participant 3 right clicked on the window expecting to see some flash settings for the microphone and camera when trouble shooting. Google+ hangouts was restarted and worked successfully on the second try.

Task 3: Found the invite button quickly and completed the task successfully. Participant 3 clicked on the image of the person they wanted to add and then would click hangout.

Task 4: Participant 3 did not see the screen share button when initially given the task and wasn't sure how to do it. They proceeded to use the computer to take a screenshot of their background and then wanted to send the file but did not know how. We told the participant that it can be done in Google+ only. Participant 3 eventually found the screen share button and clicked desktop. "There we go, now we can see everything." Participant 3 successfully stopped screen sharing and commented that "these are so easy."

Task 5: a) The chat window was easily located by participant three and had no issues pasting the link.

Task 5: b) When asked to share the youtube video and watch the video with a friend, participant 3 wanted to copy the youtube link to the chat window. The participant proceeded to explain that he would screen share and increase the volume so the friend would hear the audio. After this, he quickly located the youtube app and had no trouble using the "Add a playlist" button.

Task 6: Participant 3 had no issues opening or closing google docs.

Task 7: Participant 3 had no issues finding or installing an app and clicked "add app" on the top bar.

Task 8: Participant 3 used the app to say good bye.

Post-Questionnaire.

Participant 3 stated that finding the screen share button "was the most difficult task" while finding how to launch the hangout was the easiest (although he did not use the most efficient means). they would like to see the participant limit increased so they can talk to more people simultaneously. They would recommend Google Hangouts because it is "sharing is fun" and would really enjoy "playing game together".

Participants 4+5

Pre-questionnaire

Participant 5(B) rated themselves as an average computer user and did not use other video chat applications and was chosen as the novice participant in the constructive interaction setup. Participant 4(A) rated themselves as a slightly advanced user who had some experience using Skype to talk to family members while they were away.

task 1

Participants had some initial confusing locating Google+ Hangouts, initially looking for the feature under the 'more' tab on the Google homepage. Once they located the Google+ homepage however, the start a hangout button was almost immediately spotted. Adding the first friend showed no signs of any confusion, although the initial load time of the hangout window was noted as somewhat slow to start up.

task 2

The participants very quickly recognized the status indicators and controls in the upper right of the interface. They also noticed the green bar below their video feed indicating volume and seemed to focus more on that indicator once it had been found, proceeding to test its sensitivity.

task 3

Participants had no issues at all with finding the Invite button and there were no questions about how to proceed on the familiar friends list also seen in task 1.

task 4

The screenshare feature was located very quickly and 'desktop' was selected without question. The participants took a small amount of time discussing the video feed that they saw themselves as sending and deciding to minimize the window to properly show the actual desktop. There was a small amount of confusion over the camera being on or off at this point as they were now screensharing. Through discussion they decided that the light next to the webcam indicating activity was referring to the microphone sound they were still sending. The closing of the screenshare was more apparent to one user than the other, after showing the process again, both users understood, though one acknowledged they expected it to say 'turn off', 'unshare', or something similar.

task 5

On the initial part of the task to send a YouTube link over chat, the participants first clicked the YouTube icon that they had seen at the top. They soon remembered they were supposed to send a link though and opened the chat without having to search for any significant amount of time, successfully posting the link to the chat. Upon being told to share, they first questioned what clicking the link in chat would do before jumping right back to the YouTube app, and after a brief pause of assessment, realized to click the Add to Playlist button and easily added the video to the shared environment.

task 6

Though the facilitator had to clarify a few elements of how Google Docs permissions work to the participants, they quickly recognized how to open the Google Docs app from the top bar and select a document to work on. The process of closing the documents section was also immediately recognized based on having used the same process for YouTube and Screen Sharing.

task 7

After adding an application one user wondered how their chat partner was notified when they opened the application. The facilitator then added another app on their end to demonstrate this functionality, and upon seeing the generated notification the participants recognized it rather quickly. Apps were searched for

through the Add App button at the top of the interface and the lower apps bar did not appear to have been noticed.

task 8

The users showed no issues in figuring out how to exit and leave the Google+ Hangouts interface, though there was a small amount of confusion afterwards as to how to log out of the entire Google+ system.

post questionnaire

Participant 5(B) found the interface very easy to use, acknowledging the most difficult part to have been finding Hangouts to start with, though they still rated that as an easy task overall. They found the fact that there were no ads as a benefit of the system along side it being 'clean and easy'. Participant 4(A) found the interface to be slightly more difficult than average/expected, though again referring to the overall system as relatively 'nice, easy and simple'. Finding the start button was noted as the most challenging task, while sending a link was viewed as having been the easiest task.

Interpretations

Knowledge about System:

Novice users lacked knowledge about Google+ Hangouts and what features were available to them (e.x docs, youtube, screen share, etc...). Most were surprised how many features were integrated into the system.

Starting a Hangout:

Most participants had challenges launching Google+ hangouts. Many participants started their search by looking under the "more" feature on the home page. Also, while there are many options to start a hangout, there was no 'one' main way that stood out. Finally, the buttons have low visibility/no consistent iconography and users have trouble finding them. This may be a result of too much content on the main Google+ page creating a situation of information overload for participants.

Accessing applications on the menu bar:

The menu was clearly labeled and assisted users in navigation when entering and exiting apps such as the chat, invite, screen sharing and youtube. People understood the concept of clicking on the tab to open and closing application, however, the feedback could be a little more clear. Screen sharing was easily located and worked well, however, there was some ambiguity as to what "Desktop" meant. Users did not seem to have problems adding or inviting people to the Hangout. Applications are a main compliment of the system but users were confused when there did not seem to be as many applications as expected (ie. adding more applications than can be displayed in the top menu bar). Users did not acknowledge app bar in lower section of interface.

Sharing through Youtube:

The youtube application was easily found however, there were mixed results as to participants understanding "Add video to a playlist" even though the button was visible. Participants were very confused and took a long time to find how they could add a video to the list. They may have been

looking for the word share or were looking for a search field which wasn't readily visible. Also, the grey text in placeholder video space did not stand out and was ignored as there still was some confusion over putting a URL into the playlist field.

Overall:

Elements with familiar icons (eg. microphone, settings gear, YouTube app) were generally faster to locate than newer and unfamiliar buttons (Hangouts, Google+, YouTube playlist sharing). Many users glazed over any interface portions with large portions of text. (ie. popup when first opening YouTube app).

Suggested Improvements

Launching - Starting the Google+ Hangouts interface was the task most commonly referenced by our users as the most difficult to accomplish. Multiple users seemed to be unaware of Google or Google+ features that were not accessible from the primary Google search page, as the more commonly accessed Docs or Mail systems. The number of steps taken from that start page before discovering the Hangout system seemed to be a barrier that the users would not take without our prompt. Focusing on ways to accentuate this primary feature and make it easy to access could encourage more users to try it out.

YouTube - The YouTube application was enjoyed by users once they got it running, but the initial goal of sharing a video was a challenge for many. Most of these users tried clicking on elements of the placeholder video image. Moving the Add button to this central area when there are no videos currently in the playlist rather than being off to the side would likely increase visibility and the odds of it being utilized. Some users had trouble with the mental distinction (or lack thereof) between 'sharing a video' and 'adding to a playlist'. Considering a change in this button name may also assist in making this element more accessible.

Succinct and Visible text - Multiple users, at various points, encountered pop-up windows or information panels that they deemed as too content heavy and clicked through without fully reading them. More than once they skipped information (ex. the popup encountered when first launching the YouTube app) that was an explanation for a solution to a problem they encountered afterwards. Making some of this text more succinct, clear, and potentially integrated into visual diagrams could make it more likely for users to acknowledge, read, and understand this information.

Clear iconography - Users easily found elements they recognized the icons for, such as YouTube, the microphone, and settings gear. Using consistent, and recognizable by colour, icons for other features may assist in familiarizing users with other elements they are currently not familiar with. The hangouts icon itself, is seen in both yellow and grey in the Google+ interface, while another start a hangout button is bright red. The icon itself is also very similar to the basic video icon in Google Chat, which is familiarly associated with green.

Consistent hierarchies and feature locations - No user that was tested acknowledged the application bar at the bottom of the interface. Once they were used to the applications and features such as chat being accessed in the upper menu bar, they largely stuck to that familiar area for all such

interactions. In a similar way, the users seemed to look in the same area of the screen for application controls. Chat and screen sharing are located to the upper left of the main video area, while the Docs app also has controls in the top and upper left. Video Effects also follows this paradigm. This could be a component of the confusion encountered with the YouTube application, as it is the only application consistently tested where the controls were on the right.

Conclusion

Google+ Hangouts is a unique system that increases effective communication between users, however, this usability study identified areas that confuse and hinder users in accomplishing their goals. Although in general the users studied found the system simple enough to understand, changes could be made that would further improve the user experience, increasing user satisfaction, potentially drawing more people to use Google+ Hangouts. In conclusion, we recommend that any changes should be reevaluated in another usability test to further assess and explore their potential impact.

Appendix 1:

The think aloud method provided a more easily transcribable recording with some descriptions that utilized more description of thought processes. The constructive interaction involved some points where the 2 participants were talking at the same time, making it harder to record accurately, as well as including more side banter. The thoughts that are spoken also come in the form of a question with greater frequency. These questions are accompanied with more explanations of explicit instructions on how tasks are accomplished from the user's perspective, (sometimes even performing a task a second time to highlight the steps) but with less reasoning on the thought process as to why those are the steps that should be taken.

While it could also be simply attributable to the particular users, the constructive interaction user test saw a rather similar approach being suggested by both participants, whereas the think aloud participants showed some quite different behaviours across their sessions. This could be a side effect of the team working together's members accepting whichever one's idea came first.

Although the think alouds did have the advantage of demonstrating a wider variety of approaches, we also found that the constructive interaction users did provide a much larger quantity of explanations, as more than one think aloud had moments where they stopped talking while they looked to assess a page. Conversely, when these moments occurred with the constructive interaction team, the coach user usually had a question or suggestion to offer a secondary thought on the situation at hand.

While not particularly a fault of the method, our team also had some slight problems arranging users for a constructive interaction session compared to single talk-aloud participants. Being able to schedule around individual participants seemed to allow for a much larger quantity of tests to run, compared to the scheduling difficulties that must take in multiple users' schedules. Despite this, we acknowledge that with proper sources, this is a quite minor problem on an industry scale.

Overall we feel that both approaches have a variety of benefits, and would like to use both methods in the future. The specific choice would likely be based on the needs and expected uses of the system. For a socially oriented system or something we expect users may want to teach each other and spread to friends, constructive interaction could be a very useful tool. For more

niche systems designed for particular expert users, think-aloud would likely be more useful to us.

Appendix 2: include all raw data

Audio Transcripts

Participant 1

[Facilitator] Task 1: You want to start a Google+ hangout and invite your friend Ethan, so you can start a video chat. Locate Google+ Hangout and start a hangout.

[Participant 1] This may take a while because I have never used this before.

Facilitator: That is fine take your time, there is no rush.

[Participant 1] I see a lots of plus, I would assume that this is Google+ now. Next to the [Facilitators] name there was a plus so I am assuming that it took me to Google+.

And then... invite a friend?

[Facilitator] You need to start a Google+ hangout and invite Ethan.

So I need to start a conversation? Or...

Do I just start a conversation?

[Facilitator] Not exactly, you need to start a hangout.

[Participant 1] ...I have no idea what a hangout means.

[Participant 1 goes to chat window on the bottom of the screen.]

Now I'd like to add Ethan?

[Facilitator] Yes.

[Participant finds chat window for Ethan and finds a small hangout icon under the video icon]

So Ethan is now joining?

[Screen loads, Google+ hangout.]

[Facilitator] Your second task is, you're not sure if your microphone and camera are working correctly, check that your microphone and camera are at optimal levels.

[Participant 1] Camera and microphone...

I can check by hovering my mouse over to the top right corner. So I see that there is a camera icon, and then I know it is on cause it says it is on. Also when I click it, I get feedback that my window goes black and when I turn it back on I see myself again.

Under the microphone icon there is a bar that says, shows that my voice is receiving. When I turn off and then I see a feedback message saying that it is muted.

[Facilitator] For your 3rd task Another friend of yours wants to join your Google+ Hangout, invite them to your existing hangout. You just need to go through the motions, no need to actually invite someone.

[Participant 1] At first glance on the screen , I see that there is a invite button on the left side. I will click on it and search for a friend to join the hangout, and then the friend should automatically reply to the conversation.

[Facilitator] Now you want to share your screen with Ethan and show them your desktop background.

[Participant 1] Also, I see next to the invite screen, something called screen share. I will click on that. I want to show my desktop background, so I am going to click on desktop background. I confirmed on the share selected window. Now it's loading, I am assuming...

I see a green bar that is going, I think some users would think that it's loading. I see that it is more of a connecting... umm I see that it's connected, now I see Ethan and the two windows on my screen.

[Facilitator] Do you want to try showing another window of some sort?

[Participant 1] Sure.

[She minimized the screen and showed her desktop background.]

[Facilitator] You want to share a youtube video with Ethan titled "Oreo Smoothie Recipe by Rebecca Brand"
[link was copied]

You just need to paste the youtube link into a chat window.

[Participant 1] In the top left corner, I can see it next to the invite and screen share button, I see a chat button. I click on that and typed it in and pressed enter. He should be able to see the link.

[Facilitator] Ethan decides he wants to watch the video together. How would you go about doing that?

[Participant 1] Because it's youtube related there is a youtube button I see, so I'd assume that I'd click on that and then umm... As Ethan can see, he can see my screen now. I am too lazy to read the text (referring to pop up screen) so I just click ok. I can click on videos or search for it.

[Participant struggles to locate button to "add playlist"]

[Participant 1] Share...

Interface fail. Uhhh... Any hints?

Add a video to a playlist...

[Facilitator] The title of the video is [Oreo smoothie video by Rebecca Brand]

Can I do that? [Referring to entering url]

[Participant copies url into the add playlist field, video plays]

[Facilitator] It turns out that you should be working on a project. You want show Ethan a document. Share your Google doc with Ethan.

[Participant 1] There is a uhh Google doc button found at the top bar, so I click on that. Then which one...?
[referring to the document]

[Facilitator] The top one is fine.

[Participant 1] I click on it and then select it and I am working....

[Facilitator] How do you close the document?

[Participant 1] I will just simply click on the Google document button on top.

[Facilitator] You are finished working on your project. You want play with an app together, find an app that interests you and install it.

[Participant 1] I see that there is an add app function on the top. So I click that. There is something called skoot and doodle. Once I hover my mouse over it says to add this to my hangout. The app starts up.

[Facilitator] Okay we are almost done. Last thing for you to do is, focus on your friends video and say good bye and exit Google+ hangout.

[Participant 1] I can just exit... [Participant uses app to say goodbye]

And then close the app? Completely close hangout?

[Facilitator] Yes.

[Participant 1] I click exit.



Participant 2

task 1:

i remember it's very hidden

i think i have to go... to the main area firrst?
umm i have to go to my account
and then go to google+?
no.
ummm ok i'm gonna go view my profile
and theennnn
there's hangouts on the left side
uuuuuh what's a hangout?
muffled video conference *muffled*
uuummmm i think i have to go there
or maybe i do
well I'll learn more
OH no no start a hangout! It's in bright red I don't know how I missed it.
uhhh so...
muffled
Add names. So I have to add Ethan..
He's already a friend, so I can just click his name
And that's all I want. Let's hang out.
I didn't name the hangout, but..
Name this hangout at the top.
testing..
so...

task 2:

uumm on the top right I see that I just muted it by accident
So I can click on it.. and turn it off.
FEEDBACK
oh it's on. So I'm supposed to check on how loud it is? Cause this just goes on and off.
I guess.. Under settings? What am I checking?
Ok.

task 3:

ok so on the top bar, i see invite. And then I guess I just click someone to join us. like nicola. then click hangout.

task 4:

I see this screenshare option on the top left so I click it.
And then I choose what kind of screen I want to show them.
Well I want to show them my desktop, right? Woah.
Share selected window. Except right now I'm seeing him.
So I guess I'd have to minimize everything. Yeah so there's my desktop that I'm sharing. But I can't see him anymore.

ok so I just click screenshare again to stop it.

task 5:

so i guess i would go to the youtube button

and thenn... from therre..

welcome to youtube! *muffled* enjoy have fun! bla bla bla ok.

/you just want to share the link

oh the link?

oh so i would chat. and then type the link here. and now. I am stuck on youtube. no i'm not. just click youtube again to turn off.

watch it together? then we'd click on the youtube.

and thennn

howww do you find...

i guess if i actually had the link and i clicked on it? But i don't know if it would share.

I'm lost. there's no search button.

I don't know...

I'm supposed to share that specific video with him?

Right now I'm just trying to click every button

recommended videos....

I have no idea. Right click? no.

ok add videos. ok.

search!

so i click on that.

oh i add it. I have to add the plus sign. i can't just view it

i have to add it to my playlist before i can actually see it. ewww

oh ok i can add another one to the playlist

going to subtract this one its the wrong one.

task 6:

so i see the google doc text. if i go... yeah.

so i just click on it. and then i select it to sharre.

i did not know about this option. can both video chat and work on a paper the same time.

task 7:

closing the document.. I can just do the same thing where I click on google docs again?

ok..

i guess i would have to add app... didn't know they had games..

and thennn.. find a game we can play together. but there aren't very many options!

they dont even look like games! are we looking for a game?

/just an app/

let's play war light.. add to google hangout. requesting permission to view list of participants.. allow access?

/yes/

task 8:

byee

Participant 3

[Facilitator] task 1:

[Participant 3] *typing*
clicking
hmmmm
clicking
yay ok
start a hangout with ethan?
is ethan online?
ohmygod it's video taping me
let's add ethan
enable - do i go on air?
[Facilitator] /no/

[Participant 3] so i was right it is a video.. chat thing
i see ethan, i'm like that's not me. where am i?
i'm not moving
there are camera display issues so jump to task 2

[Facilitator] task 2:

[Participant 3]
it says on..
why why are you doing this
usually i could right click and it would give me the flash settings
oh ok there we go there i am
but its not showing there
wouldn't that be moving see i am there right now. i can see me.
but i cannot see myself
the mike is on
turn it off now you cant see me but when i turn it on, you cant see me

(system was reopened and issue was solved)

oh there we go its working

[Facilitator] task 3:

[Participant 3] i would click the person
and click hangout
and they would be added

[Facilitator] task 4:

[Participant 3] um i don't know how to do it on here do i have to do it on here?
add a new desktop then mac screen do that
then space take a picture
and then i would just send it

[Facilitator] you want to show the live version no sending files/

[Participant 3] is at an app? no

screenshare oh duh
then i'd go desktop
there we go now we can see everything there

[Facilitator] now we want to exit

ok
these are so easy

[Facilitator] task 5:
[Participant 3]

so i have to google it?
what's it called?
stop playing
chat
then paste
enter

that didnt work
oh you would screen share
then share the desktop
then we'd watch the video together
and then i'd put the volume up so you can hear it going through the mike
is there a way to watch it together through here?
go to the apps and add an app
and go to the youtube one
there we go
add video to playlist
put the video there
back
annnnd now he should be able to see the video while its playing

[Facilitator] task 6:

[Participant 3] this one? there we go!

[Facilitator] task 7:

[Participant 3] are we drawing together now?
ah hah
ok
i'm done

[Facilitator] task 8:
how do i focus
what do you mean focus
ok bye
ok

that was so cool

Participants 4&5

Participant A: male

Participant B: female

task 1

[Participant A] Push More

[Participant B] Why would I push more?

[Participant A] Because it's supposed to be a google thing

[Participant B] Are you sure?

[Participant A] I don't know... maybe you google it

[Participant B] Why would you google google +? Look. Google+. Look. Start a hangout.

[Participant A] oh. ok. I didn't see that

[Participant B] Except its loading slow

[Participant A] What did you push?

[Participant B] I pushed start a hangout on his google +

[Participant A] Because you pushed that first?

[Participant B] Yeah i went to his google plus

[Participant A] Oh so you have to have a login

[Participant B] Do i name it anything? ok.

[Participant A] You have to push...

[Participant B] It is!

[Participant A] Ok just slow.

discussion over physically positioning laptop camera to view participants while partner joins

task 2

[Participant B] Camera's working. the mike's working

[Participant A] I see microphone right there

[Participant B] They're both working

[Participant A] I see your eyeball. oh there's a green thing. sound.

[Participant B] Mhm

[Participant A] *whispers* is it sensitive?

[Participant B] *whispers loudly* yes

[Participant A] Wow you got to the top by whispering

task3

[Participant B] Invite!

task4

[Participant A] Well that's in series so relatively easy

[Participant B] Desktop? do you like my desktop?

[Participant A] Instead of our camera... so it turns our camera off?

[Participant B] No the camera's still... the camera's still on

[Participant A] No well you can hear it but

[Participant B] But the camera's still on

[Participant A] Well i guess bob can see us.. No. cause we've shared our screen to him. so now he cant see us

[Participant B] Bob can see himself

[Participant A] So now he cant see us

[Participant B] Yeah he can see himself

[Participant A] Oh because its our screen

[Participant B] So minimize

[Participant A] Now you unshowed the screen

[Participant B] I think that would be common sense i just clicked it

[Participant A] How did you do that? push the screenshare again?

[Participant B] Yes

[Participant A] Because it doesn't say unshare, it just says...

[Participant B] It was indented and then i clicked it

[Participant A] Show me again because i didn't see it

[Participant B] It goes like oooo your desktop! share your window! oh look it's indented.

[Participant A] Looks like it changes the button. then you pushed it again to make it go away

[Participant B] And then aaaaaa

[Participant A] Well it doesn't have a say turn off or something

[Participant B] Its just there..

task 5

[Participant A] You planned to go to youtube

[Participant B] Youtube link

[Participant A] It's on paste. control v

[Participant B] I didn't think you were being literal, just hypothetical

[Participant A] So you had to turn chat on to do that

[Participant B] Yeah it just

[Participant A] Cause you didn't have chat on yet

[Participant B] Its just a sidebar thing

[Participant A] But you didn't have chat on already

[Participant B] Look if you close it and you open it its still there

[Participant A] Can't you just push the hyperlink?

[Participant B] No that will get me to it, that'll take me away from this page

[Participant A] That takes you to a regular google... youtube video

[Participant B] Add video to playlist...

task 6

[Participant B] A google doc?

[Participant A] What's a google doc

[Participant B] It's a document in google

[Participant A] From my documents because it was already in your profile's document list... but we have to screen share it?

[Participant B] Like i'm still chatting with them

[Participant A] Oh i see

[Participant B] It's like having a Skype open and word open but with google

[Participant A] You can't work on a word document at the same time?

[Facilitator] *explain google docs shared documents /a bit out of scope*

task 7

[Participant B] It just says add apps.. aw this frame is too small. there we go. brush. use this colour. wait you cant see this

[Participant A] Probably when you let go of it

[Participant B] No he doesn't have the app open. oh he has dark blue.

[Participant A] Does it automatically open your app? to demo wouldn't it be good if you opened it?
facilitator opens one on other end

[Participant A] Oh it'll notify us? whats the limitation of apps?

[Participant B] Is it multitasking

[Participant B] Slideshare?

[Participant A] Oh. i see. has added... use app.

task 8

[Participant B] Just say bye?

[Participant A] Use emoticon

[Participant B] *laughter*

[Participant A] What's that? code?

[Participant B] How do i log out of your... how do i get back to google?

Notes

P1

Task 1:

clicked right on +[Facilitator Name]
struggled locating hangout in Google+
used the chat box search
hovered over icon for tooltip that said hangout

Task 2:

found icons pretty quickly
feedback volume for microphone noticed
learned to turn on/off camera
assumed that because Google+ hangout showed that her camera was on that it was fully functional

Task 3:

found invite button easily

“At first glance on the screen, I see that there is a invite button on the left side. I will click on it and search for a friend to join the hangout, and then the friend should automatically reply to the conversation.”

Task 4:

confused over desktop vs 'desktop background' but found screenshare
desktop share displayed what she was viewing, the google+ hangout window, initially thought that the microphone
indicator was a loading bar. Couldn't tell the difference initially because the little window looked a lot like the
"friends" window because it was full screened.

Task 5:

got to app but then confused about how to share the video

focused on the video area enlarging before shrinking it and finding button

didn't try clicking on anything other than that before eventually finding the right button

copied url into the search which was correct

Task 6:

clicked the tab to close with no issues

finally stopped screensharing when prompted

Task 7:

clicked on add an app on the top bar

found add apps easy

Task 8:

exited smoothly



P2

Task 1:

Clicked more, then icon my account, google+ settings, -> view my profile -> hangouts on leftreading info, scrolling.
up to top start a hangout

read before typing

oops didnt name but then adjusted

Task 2:

top right

found settings with gear alongside mute+camera on/off

Task 3:

found invite button straight away. easy to add and find friend in list

Task 4:

screenshare clicked -> desktop selected -> started -> minimized
click screenshare again to stop

Task 5:

Went to youtube app first
then chat when clarified

opened youtube
tried clicking on main page
right clicking
eventually found add videos
tried click on title after searching
then realized to hit + icon

Task 6:

opened docs right away
selected document then share
click google docs again to close no problems

Task 7:

Add App at top
problems finding a 'game'

Task 8:

closed without problem

**P3****Task 1:**

clicked on more
then google searched
start a hangout
clicked link

named hangout

Task 2:

found settings easily and correctly
weird bug but fixed on relaunch

Task 3:

found invite easily

Task 4:

screenshot
apps
then screenshare
found exit no problem

Task 5:

went straight to chat to paste
tried to screenshare
then found app and did quickly

Task 6:

no problem

Task 7:

no problem

Task 8:

no problem

**P4+5:****task 1**

Participants had some initial confusing locating Google+ Hangouts, initially looking for the feature under the 'more' tab on the Google homepage. Once they located the Google+ homepage however, the start a hangout button was almost immediately spotted. Adding the first friend showed no signs of any confusion, although the initial load time of the hangout window was noted as somewhat slow to start up.

task 2

The participants very quickly recognized the status indicators and controls in the upper right of the interface. They also noticed the green bar below their video feed indicating volume and seemed to focus more on that indicator once it had been found, proceeding to test its sensitivity.

task 3

Participants had no issues at all with finding the Invite button and there were no questions about how to proceed on the familiar friends list also seen in task 1.

task 4

The screenshare feature was located very quickly and 'desktop' was selected without question. The participants took a small amount of time discussing the video feed that they saw themselves as sending and deciding to

minimize the window to properly show the actual desktop. There was a small amount of confusion over the camera being on or off at this point as they were now screensharing. Through discussion they decided that the light next to the webcam indicating activity was referring to the microphone sound they were still sending. The closing of the screenshare was more apparent to one user than the other, after showing the process again, both users understood, though one acknowledged they expected it to say 'turn off', 'unshare', or something similar.

task 5

On the initial part of the task to send a YouTube link over chat, the participants first clicked the YouTube icon that they had seen at the top. They soon remembered they were supposed to send a link though and opened the chat without having to search for any significant amount of time, successfully posting the link to the chat. Upon being told to share, they first questioned what clicking the link in chat would do before jumping right back to the YouTube app, and after a brief pause of assessment, realized to click the Add to Playlist button and easily added the video to the shared environment.

task 6

Though the facilitator had to clarify a few elements of how Google Docs permissions work to the participants, they quickly recognized how to open the Google Docs app from the top bar and select a document to work on. The process of closing the documents section was also immediately recognized based on having used the same process for YouTube and Screen Sharing.

task 7

After adding an application one user wondered how their chat partner was notified when they opened the application. The facilitator then added another app on their end to demonstrate this functionality, and upon seeing the generated notification the participants recognized it rather quickly. Apps were searched for through the Add App button at the top of the interface and the lower apps bar did not appear to have been noticed.

task 8

The users showed no issues in figuring out how to exit and leave the Google+ Hangouts interface, though there was a small amount of confusion afterwards as to how to log out of the entire Google+ system.