

# Facebook Spaces Analysis

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August 2018; experiments held in July 2018 at Duy Tan

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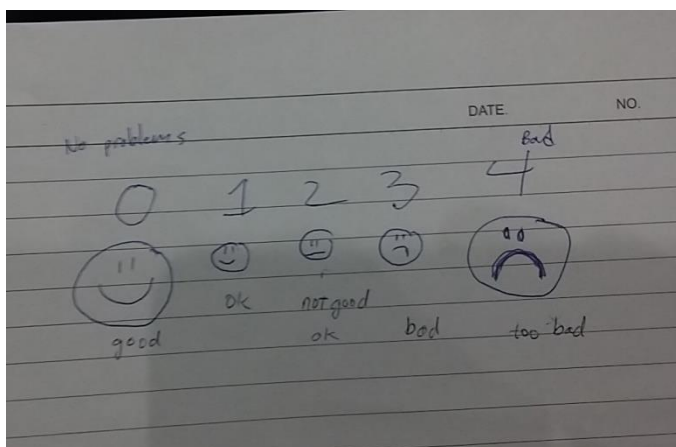
Facebook Spaces BETA is a Virtual Reality (VR) application that can be used with Oculus virtual headset. The experiment was to study the Human Computer Interaction (HCI) with the application and to observe how user friendly the application can be.



Ten volunteers were able to attend and use the Facebook Spaces application with Oculus between July 19<sup>th</sup> and July 24<sup>th</sup> in the year 2018; questionnaires involving personal experience prior the trials and experiments were sent out and given starting July 27<sup>th</sup>. There 5 males and 5 females volunteers. English was a secondary language for some of the users in the trials.

The participants also goes by the name PL01, PV02, PB03, PD04, PH05, PM06, PJ07, PT08, PK09, and PC10.

Cognitive Surveys and questions were done while the volunteers put on the Oculus equipment and enter the virtual world of Facebook Space. For some it was the first time they had used the application; for some it was probably one of the first times that they had used VR or Oculus.



I severity score, between 0- 4, was available for each optional task. It had to be explained that “zero” meant “zero problems” and “four” was not good (or too many problems). The scale is similar to a health care pain chart; it is not a star score for movies or an overseas school grade. A drawing of “smiling” faces was made to help give an idea of the severity score; it was easier to understand when presented before asking questions.

The beginning questions involved the comfort of the headset and how well the users have a grasp of the two hand controls (one in each hand). For a few of the users, the headset got

uncomfortable and heavy after about an hour of use. One teenaged volunteer, PM06, got worried if staring into the bright lights of the Oculus headset was safe for the eyes for a certain period of time. At least three of the volunteers were seeing impaired; two removed their glasses and at least one wore contact lenses.

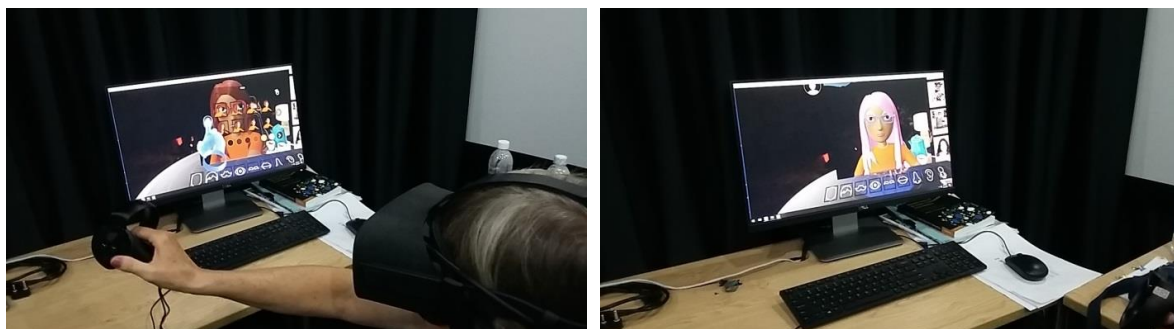
For a few of the users, the battery may have been too low or a hand controller would not be working. Some had trouble getting the finger to “glow” when inside the VR.

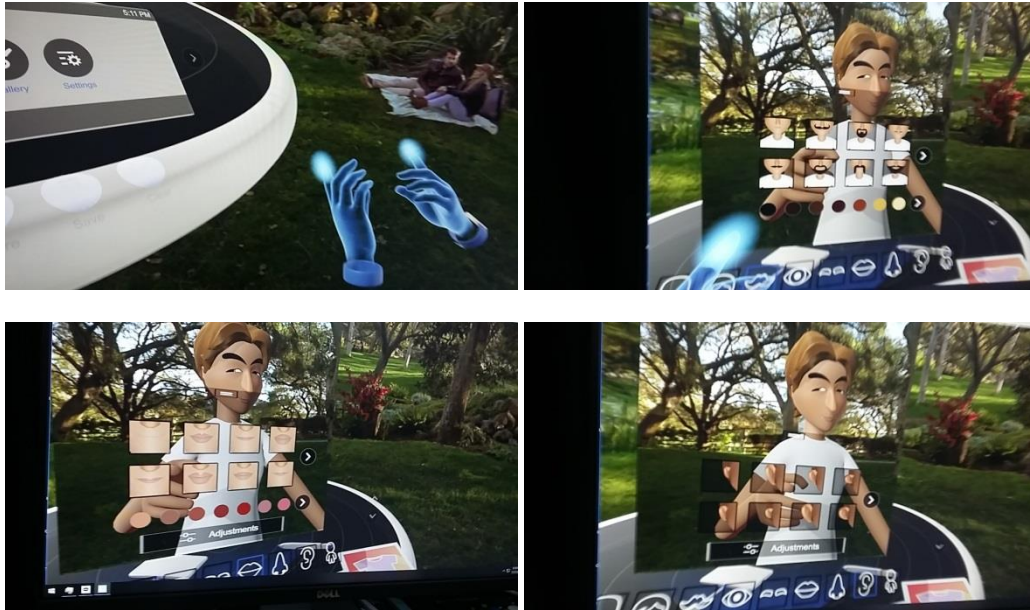


Once the headset is on and the user is logged (with their own account or someone else’s for at least two users, PC10 and PK09), two transparent and blue hands should appear. The left had a wrist watch for most of the users in this experiment.

The background after the log in would either be the “camp fire- night time” or the “dogs in the park – day time.” Volunteer PT08 received the “day time” background and re-acted with happiness to see *puppies*. Volunteer PC10 was charmed with “camp fire” scenery or American nostalgia. Prior to the experiment, there was concerned that the background could not be change (or we had trouble selecting the backgrounded of a desired choice). Originally, it seemed like an opportunity to use VR for “mock Interviews,” but the restrictions with background selections would be one of the few obstacles for such activities.

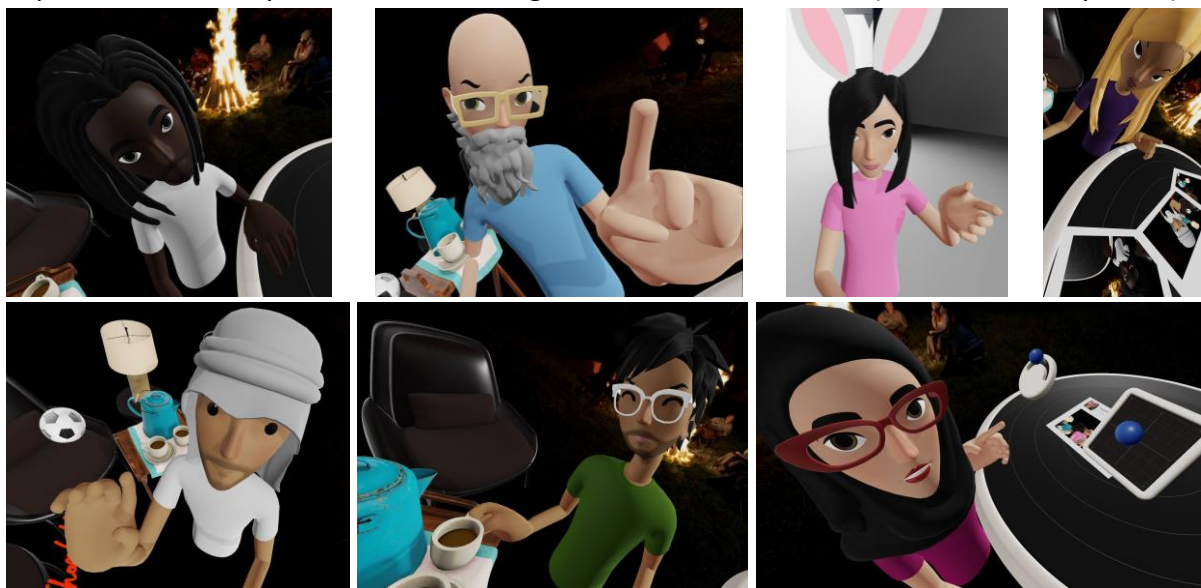
After getting used to headset, or at least try to understand the controllers, each volunteer is offered or requested to customize an avatar. For first time users, the application would offer avatar selections based off profile photographs already on one’s Facebook page or to make avatar manually. On the dashboard, the appearance feature has a picture frame icon.





Some selections are easy to see. But checking the appearance for one's avatar was difficult for some users when the face and body was behind the choices. It could involve the level of the table or the height of the user, but the design could have been better.

There was a lot of variety for skin tones; perhaps *Facebook Spaces* was trying to reach out to large diversity of users. Hijab head covers and turbans can be chosen under the selections of hair. But at least one user (PJ07) in the experiment wished for more varieties and shades for lite skin tones; the lightest one was not lite enough. One user, PT08, attempted to look for an option to add freckles to the avatar's face. Beauty marks did not seem to be available. Earrings (symmetrical and asymmetrical), did not seem to be available; although a user outside the experiment could try to be creative and glue art work to face later (like with "bunny ears")





The selection of clothes is extremely limited. The design of the clothing is limited to the “t-shirt.” There is a selection of at least 18 colors to pick from and the colors cannot be customized like the markers used to draw pictures. There are no blazers, business blouses with ties, long sleeved shirts, tanks or v neck shirts. This disappointed a few users. The display of “four t-shirts” confused at least

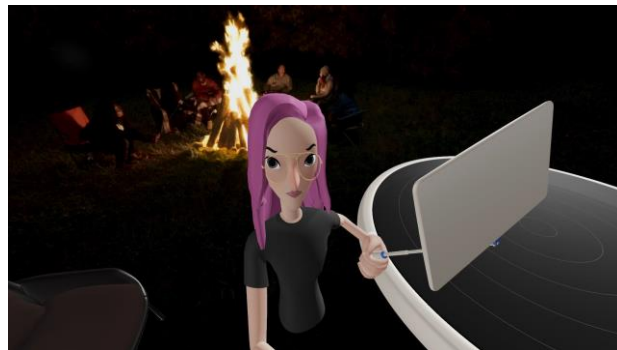
4-5 users. User PL01 though the fashion designs were “too simple” (even when there was an option to add just one picture or a “decal”). User PJ07 may have compared the colors to be limited or bland. User PH05 however found the colors easy to select.

There is a limited selection of glasses with a choice of different colors much like the t-shirts. The color of the lens cannot be changed or become sunglasses.

Photographs can cut up and applied to the t-shirt as a “decal” and it can be removed when re-selecting shirt colors.



Users can use the selfie-stick to take pictures. It is found under “tools,” the “paint brush” icon on the dashboard. The selfie-stick takes pictures like the ones in real life, however to save the photo taken, the users has to upload the pictures to their Facebook page. Some volunteers were too shy to do this. One user deleted his picture from his “wall” and did not like it.



Many some dropped the selfie-stick when trying to explore or understand how to take a picture in the VR world. Once dropped the selfie-stick did not come back. The VR floor in this application was bottomless and the stick could not be picked up off the floor like in the real world.



The user can upload photos or save images by rotating a wrist and selecting the options available. The index finger has to glow to select. The images should be saved in the “gallery.” The “recall” after an imaged is saved, is vague for some users.

Note: the image to the left is a user outside of the experiment saving a drawing that looks like a game of “Tic-Tac-Toe.”

User can also draw in *Facebooks Spaces*. Squeezing the hand to grab the marker helps, but it takes some users a while to understand when or how to let go of the hand when drawing.

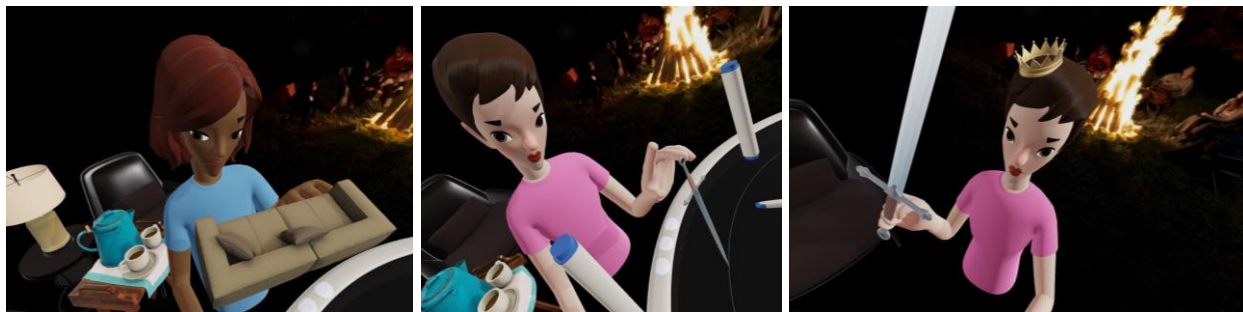


Three dimensional drawing is unique in *Facebook Spaces*. A large selection of colors is available and the users can selection how thick the line can be displayed. Connecting the lines is a challenge in 3-D and the user has to pay attention. One user, TK09, loved drawing in 3-D and wishes the severity score be below a “zero.” Severity scores were between 0 -2.

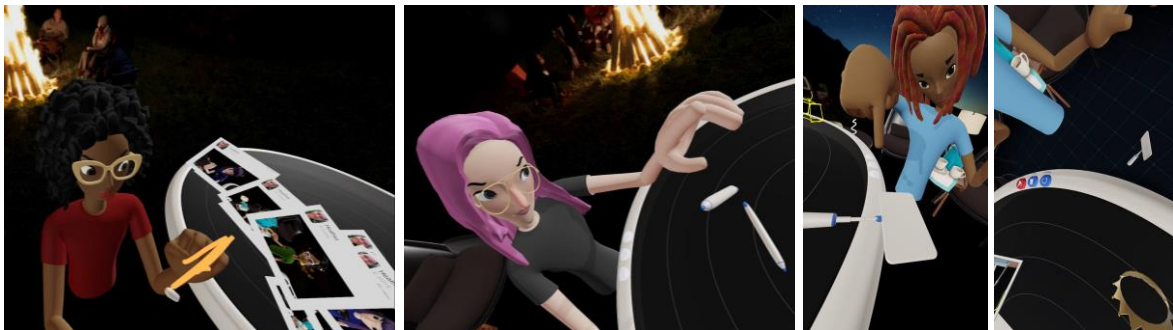




Images saved on the same computer can be viewed in the “You” gallery by any user on the same computer. The “You” gallery has drawings, some by different artist or the staff from Facebook. The “Explore” gallery has 3-D item. The user changed the size if the option is available on the wrist. Some 3-D items can be glued on the avatar like a crown or hat.



Unlike the picture taken with the selfie-stick and images drawn by the markers, the selfie-stick and markers themselves do not float. The avatar floats over what appears to be a bottomless floor. When a user, including many in the experiment, drops the marker or selfie-stick, the user has to go back to “tools” to retrieve a new selfie-stick or marker.



A few users played a fishing game, “Arctic Open,” but they found it difficult. One found the tutorial to be not very helpful. The severity score was high and bad.

Some found the experiment to be an interesting experience. Some were willing to use the application again. One user felt sad that she did not own an Oculus, while one felt that once was enough for now. Another user felt that he would be willing to use it again if his friends had the same technology; Facebook Spaces was definitely a social application.