Evaluation of our product

After a project is done and a product has been made, the product needs to be evaluated. There exist different types of evaluation methods which can be used. The one that is most important is the user experience evaluation (UX evaluation). A UX evaluation evaluates 7 aspects of a product: Is the product useful, usable, valuable, desirable, findable, creditable, and accessible? By evaluating these aspects, you of course want to know if the user will be satisfied with the product as well as potential stakeholders (people who are affected by the user using this product). If either of them is not satisfied, the product will not be used.

Different types of tests can be done to evaluate the product: in-person usability testing, monitored remote usability testing and unmonitored remote usability testing. In our case, the user is not comfortable with having contact in an online environment so we would only do the in-person usability testing and unmonitored remote usability testing.

In the beginning of our project, we got to know our user and her preferences. She explained her lifestyle and potential things in her life she would like to find a solution for. After talking for an afternoon, we concluded that painting is her happy place in life, and she would love to have something which could help her to paint for a longer period of time. The project group came together and started thinking about possible solutions. The next time meeting the user, much information needed to be gathered without making the user biased or tempted to give certain answers. For this session, we brought a wooden board. We gave this board to the user to show us what kind of functions she wanted the canvas to have. After she showed her favorite positions for the canvas to be in, we asked some follow up questions and eventually created a requirements list which we brought home to create the concepts. Eventually we came up with the final concept and visited our user one more time to make some measurements for a personalized arm support.

Unfortunately, we couldn't find another moment to evaluate the final product with our user, but this is how we would have done it. We would show the product to her and let her do a task analysis. We would come up with a scenario (for example, you want to draw a circle with a straight-line underneath it. This drawing will fill up the whole canvas, good luck) and record her performing the task. We designed a canvas with an elbow rest attached to it. If she would press her foot on the foot pedal, she would be able to move her elbow up and down and sideways. We used a foot pedal as the user told us in one of the sessions that she is used to working with a sewing machine. She will know that when she pushes the pedal, the elbow rest will be able to move. The product offers a similar command to what she is used to. As the rest of the mechanism is still new to our user, she will still need to generate a natural feeling with our product which might take some time.

After the first testing we will use unmonitored remote usability testing so that after some time, we can test the Probability of Attending (will the user use our product) and evaluate the 7 aspects of a product. The probability of attending is based on a formula: $F(A) = S - EF + (EX * V)$. Where $F(A)$ = probability of attending, S = Salience of information (the ability of the product to grab your attention), EF = Effort it takes to use the product, EX = Expectancy (is the product relevant for the user) and V = Value of the product to the user. With a period of time having the user use the product we can determine if she likes using the product and if it will have an impact on her way of life. After some time using the product, we will visit the user again and ask questions about how her experience was with the product. Questions like: Has the product lived up to your expectations? Were you able to give enough input on how the product should look like? How simple and easy is the product to use? Are there still some parts of the product that need to be adapted? etc. With all the information the project group will gather from these

questions, extra adaptations will be made, and an evaluation will be written which the project group will take with them to evaluate themselves for future projects.

Next to evaluating the user's experience about the use of the product, we will also ask some questions to the caretakers of our user (the stakeholders). How did they experience the user using the product? Did she need more or less help with painting? How did this product affect the caretaker's workload? Has the product had a positive or negative influence on the user? etc. By asking the caretakers questions about the product, we can get a different view on the product and the experience which will lead to a better evaluation.

After evaluating the product with the user and the stakeholders, we will also have an evaluation within the project group. This evaluation will be about teamwork, keeping up with the deadlines, workload of each member, communication with the user, satisfaction with the finished product and overall experience with this specific project. This evaluation is done to make sure that everybody is satisfied with the final product and process and can take their experience with them to future projects.