

Evaluation plan

Introduction

Since the prototype is made in close collaboration with the co-designer, the product needs to be evaluated in order to test the functionality. The focus is on functionality, while the user experience is closely observed as well. The prototype is not dishwasher proof due to the 3d-printed design, so this will not be tested. The main testing should be conducted by the co-designer; however, the main principles can be tested by the design team as well. The following plan structures the evaluation and the steps that need to be taken. During this evaluation process, the tester and product should be closely observed, based on user behavior and response.

Functionality evaluation

Putting the lid on

Putting the lid on the mug is the first step in the process of transporting the drink safely. In theory, the conical shape seals the mug/cup, while the grippers make sure the lid does not fall off. For this first step, the easiness of putting the lid on the mug is going to be evaluated. It is important that the co-designer can easily guide the lid onto the mug, and the grippers should be easy to operate. While it is important that the grippers are easy to operate, the clamping should be sufficient so that the lid does not fall off. The following assessment scheme is used for the evaluation, the values should be filled in by the co-designer. One to five points are given per topic, where one point is the worst, and five points is the best rating.

Points	1	2	3	4	5
Putting the lid on ¹					
Gripper operation ²					
Gripper strength ³					

1 – How easily can the co-designer guide the lid onto the mug (needs to be rated by the co-designer)

2 – Rating is based on the ease of pinching, expectations on easiness of use in the future (needs to be rated by the co-designer)

3 – Is the gripper strong enough to keep the lid on the mug while the co-designer is walking (can be tested by project group)

Walking with the product

The second step in the sequence is walking with the mug and product. The lid should prevent the drink from spilling while the co-designer is walking with the mug. Because of the loss in balance, walking with a mug causes the mug to bump a lot. In order to test if the product works, the co-designer needs to walk with the mug and lid and test if the lid does not fall of and if the drink does not spill. The following questions need to be observed:

- Does the lid seal the mug while the co-designer is walking?
- Does the lid stay in place while walking?

Removal of the product

When the co-designer has arrived at the seating location, the lid can be taken off. It is important that the lid can be taken off without spilling the drink. Besides that, it should be comfortable to place the lid somewhere else for future use. To conclude this, the following questions are of importance:

- *Can the lid be taken off without spilling the drink?*

Since it is important that the co-designer can comfortably remove the lid from the drink and place the lid somewhere else, this should be rated by the co-designer using the following table where one point is the lowest and five points is the highest.

Points	1	2	3	4	5
Removing the lid					

Experience evaluation

The user experience is extremely important, since the user interacts with the product on a daily basis. The following questionnaire is meant as a basis for the experience evaluation, with room to discuss the different topics.

Appearance

- *If you (co-designer) would rate the overall appearance of the product on a scale from one to five, what would you give?*
- *Could you elaborate on this rating? What are things you like/dislike about the product?*

Functionality

- *Purely based on comfortability, would you increase or decrease the spring strength?*
- *Are the handles of the gripper comfortable to use? Is there any way you would modify these, and why?*
- *Are there any functionality aspects you would like to see changed or modified in any way?*
- *Do you have any additional remarks on the product?*

Requirement evaluation

The material requirements are not applicable for this prototype since it's focused on functionality and made with the materials available. The design and functionality requirements can be checked using the following table in cooperation with the co-designer.

Requirement	Comments
Should fit Jack's preferred style (Style college)	
Should implement humorous design aspect	
Should fit into the use environment	

Should be attachable and detachable in one movement	
Mechanism should be usable with one hand	
Product must prevent mug from spilling from shocks	
Product should be adaptable to different shapes and sizes of mugs and glasses	
Product should be compatible with a coffee machine	
Product should be operable in the later stages of his illness	