

XR Interaction Test3 – Questionnaire

Participant Information

Participant ID: _____

Age: _____

Gender: _____

VR Experience Level:

☐ Beginner ☐ Intermediate ☐ Advanced

Task 1: Toolbox Location and Tool Switching

Were you able to **clearly find the location of the toolbox** in the scene?

☒ Yes ☐ No

Were you able to **successfully switch between different tools** (for example, different brush sizes or the eraser)?

☒ Yes ☐ No

Please rate how **convenient** the tool switching was (1 = Very Inconvenient, 5 = Very Convenient):

1 ☐ 2 ☐ 3 ☐ 4 ☒ 5 ☐

Open-ended Question:

In many other VR painting applications, tools are switched using a virtual menu on the user's non-dominant hand.

In this prototype, the switching is done through **physical grabbing and changing**.

Which method feels more natural or easier to use for you, and why?

Definitely this one, it's more similar to the real world interaction way.

Task 2: Pigment Picking and Placement

Were you able to **successfully pick and take a pigment** from the pigment box?

☒ Yes ☐ No

Were you able to **place the pigment onto the palette** smoothly?

☒ Yes ☐ No

Please rate how **intuitive** the color-picking process felt (1 = Very Unintuitive, 5 = Very Intuitive):

1 ☐ 2 ☐ 3 ☒ 4 ☐ 5 ☐

Open-ended Question:

In previous versions, users needed to keep a specific distance between the brush tip and the palette to pick a color.

This time, the pigment-ball system was used instead.

Did this change make the interaction feel more natural?

If you still had difficulties, please describe them or give suggestions for improvement.

If all smooth, it is. But the animation is not that smooth so far. However, it is not a big deal. I can understand the procedure easily.

Task 3: Joystick Mixing System

Were you able to understand and complete the **color-mixing operation using the left joystick rotation**?

☒ Yes ☐ No

Please rate how **easy** the joystick mixing was to use (1 = Very Difficult, 5 = Very Easy):

1 ☐ 2 ☐ 3 ☒ 4 ☐ 5 ☐

Please rate how **natural and realistic** the mixing effect felt (1 = Very Unnatural, 5 = Very Natural):

1 ☐ 2 ☐ 3 ☒ 4 ☐ 5 ☐

Open-ended Question:

Did using the joystick to mix colors feel intuitive to you?

Would you prefer a future version that allows **real physical stirring** with the brush instead?

Please explain your preference and reasons.

Perfect! It is intuitive. But the feedback is not that clear when I pick a color and put it on the placement. But use the left controller to control the level of mixing is interesting.

Overall Experience

Please rate how **intuitive** the overall interaction experience was (1 = Not Intuitive, 5 = Very Intuitive):

1 ☐ 2 ☐ 3 ☒ 4 ☐ 5 ☐

Please rate how **enjoyable** the overall experience was (1 = Not Enjoyable, 5 = Very Enjoyable):

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒

Open-ended Question:

Please describe which part of this experience you liked the most and what could be improved.

I think the most interesting part is

using the left controller to mix different pigment, and draw on the paper to

see the difference.