

XR Interaction Test3 – Questionnaire

Participant Information

Participant ID: _____

Age: 23

Gender: male

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?

This prototype's physical grabbing method is more natural for me, it makes me feel more immersed. There were no false touches or failure to pick up the tool during the experience, so I can also say it is easy to use.

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.

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.

If real physical stirring features could achieve it would be great, this can provide further immersion

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 brush part could be improved a bit further, if you could reflect the current dipped color on the brush just