

VIRTUAL REALITY NEUROSCIENCE QUESTIONNAIRE

Please, from 1 to 7, **circle** the response that closely represents your opinion.



THE UNIVERSITY of EDINBURGH
School of Philosophy, Psychology
and Language Sciences

User Experience

What is the level of immersion you experienced?

1 2 3 4 5 6 7

Extremely Low Very Low Low Neutral High Very High Extremely High

Please write below any additional comments and/or suggestions relevant to the question above:

What was your level of enjoyment of the VR experience?

1 2 3 4 5 6 7

Extremely Low Very Low Low Neutral High Very High Extremely High

Please write below any additional comments and/or suggestions relevant to the question above:

How was the quality of the graphics?

1

2

3

4

5

6

7

Extremely Low

Very Low

Low

Neutral

High

Very High

Extremely High

Please write below any additional comments and/or suggestions relevant to the question above:

How was the quality of the sound?

1

2

3

4

5

6

7

Extremely Low

Very Low

Low

Neutral

High

Very High

Extremely High

Please write below any additional comments and/or suggestions relevant to the question above:

How was the quality of the VR technology overall (i.e. hardware & peripherals)?

1

2

3

4

5

6

7

Extremely Low

Very Low

Low

Neutral

High

Very High

Extremely High

Please write below any additional comments and/or suggestions relevant to the question above:

Game Mechanics

How easy was to use the navigation system (e.g. teleportation) in the virtual environment?

1 2 3 4 5 6 7

Extremely Difficult Very Difficult Difficult Neutral Easy Very Easy Extremely Easy

Please write below any additional comments and/or suggestions relevant to the question above:

How easy was to physically move in the virtual environment?

1 2 3 4 5 6 7

Extremely Difficult Very Difficult Difficult Neutral Easy Very Easy Extremely Easy

Please write below any additional comments and/or suggestions relevant to the question above:

How easy was to pick up and/or place items in the virtual environment?

1 2 3 4 5 6 7

Extremely Difficult Very Difficult Difficult Neutral Easy Very Easy Extremely Easy

Please write below any additional comments and/or suggestions relevant to the question above:

How easy was to use items in the virtual environment?

1

2

3

4

5

6

7

Extremely Difficult

Very Difficult

Difficult

Neutral

Easy

Very Easy

Extremely Easy

Please write below any additional comments and/or suggestions relevant to the question above:

How easy was the 2-handed interaction e.g., grab the tablet with the one hand, and push the button with the other hand?

1

2

3

4

5

6

7

Extremely Difficult

Very Difficult

Difficult

Neutral

Easy

Very Easy

Extremely Easy

Please write below any additional comments and/or suggestions relevant to the question above:

In-Game Assistance

How easy was to complete the tutorial(s)?

1

2

3

4

5

6

7

Extremely Difficult

Very Difficult

Difficult

Neutral

Easy

Very Easy

Extremely Easy

Please write below any additional comments and/or suggestions relevant to the question above:

How helpful was/were the tutorial(s)?

1

2

3

4

5

6

7

Extremely Unhelpful Very Unhelpful Unhelpful Neutral Helpful Very Helpful Extremely Helpful

Please write below any additional comments and/or suggestions relevant to the question above:

How did you feel about the duration of the tutorial(s)?

1

2

3

4

5

6

7

Extremely More Much More More Neutral Enough Time Much Time Plenty of Time
Time Needed Time Needed Time Needed Available Available Available

Please write below any additional comments and/or suggestions relevant to the question above:

How helpful were the in-game instructions for the task you needed to perform?

1

2

3

4

5

6

7

Extremely Unhelpful Very Unhelpful Unhelpful Neutral Helpful Very Helpful Extremely Helpful

Please write below any additional comments and/or suggestions relevant to the question above:

How helpful were the in-game prompts e.g. arrows showing the direction, or labels?

1 2 3 4 5 6 7

Extremely Unhelpful Very Unhelpful Unhelpful Neutral Helpful Very Helpful Extremely Helpful

Please write below any additional comments and/or suggestions relevant to the question above:

VR Induced Symptoms and Effects (VRISE)

Did you experience nausea?

1 2 3 4 5 6 7

Extremely Intense Very Intense Intense Moderate Mild Very Mild Absent

Feeling Feeling Feeling Feeling Feeling Feeling

Please write below any additional comments and/or suggestions relevant to the question above:

Did you experience disorientation?

1 2 3 4 5 6 7

Extremely Intense Very Intense Intense Moderate Mild Very Mild Absent

Feeling Feeling Feeling Feeling Feeling Feeling

Please write below any additional comments and/or suggestions relevant to the question above:

Did you experience dizziness?

1	2	3	4	5	6	7
Extremely Intense	Very Intense	Intense	Moderate	Mild	Very Mild	Absent
Feeling	Feeling	Feeling	Feeling	Feeling	Feeling	

Please write below any additional comments and/or suggestions relevant to the question above:

Did you experience fatigue?

1	2	3	4	5	6	7
Extremely Intense	Very Intense	Intense	Moderate	Mild	Very Mild	Absent
Feeling	Feeling	Feeling	Feeling	Feeling	Feeling	

Please write below any additional comments and/or suggestions relevant to the question above:

Did you experience instability?

1	2	3	4	5	6	7
Extremely Intense	Very Intense	Intense	Moderate	Mild	Very Mild	Absent
Feeling	Feeling	Feeling	Feeling	Feeling	Feeling	

Please write below any additional comments and/or suggestions relevant to the question above:

Virtual Reality Neuroscience Questionnaire (VRNQ) – Scores

Section	Score	Minimum Cut-offs	Parsimonious Cut-offs
User Experience		≥ 25	≥ 30
Game Mechanics		≥ 25	≥ 30
In-Game Assistance		≥ 25	≥ 30
VRISE		≥ 25	≥ 30
<u>Total VRNQ</u>		≥ 100	≥ 120

The median of each sub-score and totals score should meet the suggested cut-offs to support that the evaluated VR software has an adequate quality without any significant VRISE.

The utilisation of the parsimonious cut-offs more robustly supports the suitability of the VR software.

The VR Neuroscience Questionnaire (VRNQ) was developed by Panagiotis Kourtesis

in affiliation with University of Edinburgh & University Suor Orsola Benincasa of Naples.



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