**Supplementary S1: Usability survey**

Student ID: \_\_\_\_\_\_\_\_\_\_

**VR Usability (VR Activity)**

For each entry below, **circle the response** that best characterized how you feel about the statement.

Discomfort

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| I felt some discomfort (e.g. sickness, eye strain etc.) | 1 | 2 | 3 | 4 | 5 |

Effectiveness (ease of learning and using)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| It was easy to use and navigate in VR | 1 | 2 | 3 | 4 | 5 |
| VR helped me understand the landslides and research work conducted in Atsuma better | 1 | 2 | 3 | 4 | 5 |

Satisfaction

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| I was very satisfied with the VR experience | 1 | 2 | 3 | 4 | 5 |
| I would recommend the VR activity to other students | 1 | 2 | 3 | 4 | 5 |
| I liked the VR experience | 1 | 2 | 3 | 4 | 5 |

Engagement

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| I wanted to continue the VR activity beyond the time limit | 1 | 2 | 3 | 4 | 5 |
| During the VR activity, it felt like I was really there | 1 | 2 | 3 | 4 | 5 |

Accessibility

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| The VR application provided sufficient help and support | 1 | 2 | 3 | 4 | 5 |
| I easily understood how to use the features of VR regardless of prior VR experience | 1 | 2 | 3 | 4 | 5 |

**Supplementary S2: Motivational survey**

Student ID: \_\_\_\_\_\_\_\_\_\_

**Motivational Survey (\_\_ Activity)**

For each entry below, **circle the response** that best characterized how you feel about the statement.

Interest/ Enjoyment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
| The \_\_ activity was fun & entertaining | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The \_\_ activity was enjoyable & satisfying | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The \_\_ activity was interesting　& appealing | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Perceived competence

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
| I understood majority of the \_\_ session | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I felt I performed better than my peers | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I felt more confident and capable about my newly acquired knowledge after the \_\_ activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Perceived choice

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
| I was involved with the \_\_ activity because I wanted to | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I felt I had some freedom of choice during the \_\_ activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Effort/Importance

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
| I had to put a lot of effort during the \_\_ activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| It is important to me to do well during the \_\_ activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Pressure/Tension

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
| The \_\_ activity felt tense | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I felt anxious during the \_\_ activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Value/Usefulness

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
| The \_\_ activity will value me in the future | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The \_\_ session is useful for my geological knowledge | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| This \_\_ experience improved my motivation in Geology | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Supplementary S3: Open comments**

Student ID: \_\_\_\_\_\_\_\_\_\_

**Open entry (\_\_ Activity)**

* In your opinion, what are the positive parts of the \_\_ experience?
* In your opinion, what are the negative parts of the \_\_ experience?
* Please provide some suggestion to improve the \_\_ activity and experience