## Exploring Engagement and Reflection - Questionnaire Items

The items below include the necessary items used to report and repeat the findings in the paper. The questionnaire was hosted on Google Forms. Text in *grey and italics*, and headings, were not shown to participants. Please refer to the cited papers for instructions on calculating metrics.

### Pre-Task

Demographics

**What is your age?**

**What is your gender?**

**What is your country of birth?**

**What is your course of study?**

**Which year into your course of study are you in?**

Goldsmiths MSI (Müllensiefen et al., 2014)

**Please indicate the extent to which you agree with the following statements:**
*Option: Completely Disagree, Strongly Disagree, Disagree, Neither Agree Nor Disagree, Agree, Strongly Agree, Completely Agree*
- I spend a lot of my time doing music-related activities.
- I enjoy writing about music, for example on blogs and forums.
- If somebody starts singing a song I don't know, I can usually join in.
- I can sing or play music from memory.
- I am able to hit the right notes when I sing along with a recording.
- I can compare and discuss differences between two performances or versions of the same piece of music.
- I have never been complimented for my talents as a musical performer. *(Reversed)*
- I often read or search the internet for things related to music.
- I am not able to sing in harmony when somebody is singing a familiar tune. *(Reversed)*
- I am able to identify what is special about a given musical piece.
- When I sing, I have no idea whether I'm in tune or not. *(Reversed)*
- Music is kind of an addiction for me - I couldn't live without it.
- I don't like singing in public because I'm afraid that I would sing wrong notes. *(Reversed)*
- I would not consider myself a musician. *(Reversed)*
- After hearing a new song two or three times, I can usually sing it by myself.

**Please fill in the gap for the following statement, selecting the option nearest to the value which fits best. "I engaged in regular, daily practice of a musical instrument (including voice) for ___ years."**
- 0
- 1
- 2
- 3
- 4-5
- 6-9

- 10 or more

**Please fill in the gap for the following statement, selecting the option nearest to the value which fits best. "At the peak of my interest, I practiced ____ hours per day on my primary instrument."**
- 0
- 0.5
- 1
- 1.5
- 2
- 3-4
- 5 or more

**Please fill in the gap for the following statement, selecting the option nearest to the value which fits best. "I can play ____ musical instruments"**
- 0
- 1
- 2
- 3
- 4
- 5
- 6 or more

**Complete the following statement. Feel free to write none if you can't play any instruments. "The instrument I play best (including voice) is _____".**

Self-Reflection and Insight Scale (Grant et al., 2002)

**Please indicate the extent to which you agree with the following statements...**
*Options: of "Strongly Disagree" to "Agree" placed on either end of a 6-point scale.*
- I don't often think about my thoughts. *(Reversed)*
- I rarely spend time in self-reflection. *(Reversed)*
- I frequently examine my feelings.
- I don't really think about why I behave the way that I do. *(Reversed)*
- I frequently take time to reflect on my thoughts.
- I often think about the way I feel about things.
- I am not really interested in analysing my behaviour. *(Reversed)*
- It is important for me to evaluate the things that I do.
- I am very interested in examining what I think about.
- It is important to try and understand what my feelings mean.
- I have a definite need to understand the way that my mind works.
- It is important to me to be able to understand how my thoughts arise.
- I am usually aware of my thoughts.
- I'm often confused about the way that I really feel about things. *(Reversed)*
- I usually have a very clear idea about why I behaved in a certain way.
- I'm often aware that I'm having a feeling, but I often don't quite know what it is. *(Reversed)*
- My behaviour often puzzles me. *(Reversed)*
- Thinking about my thoughts makes me more confused. *(Reversed)*
- Often, I find it difficult to make sense of the way I feel about things.
- I usually know why I feel the way that I do.

## User Engagement Questionnaire – Short-Scale (O'Brien et al., 2018)

**Please indicate the extent to which you agree with the following statements, thinking only about the software you used in the last activity.**

*Options: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree*

- I lost myself in this experience.
- The time I spent using the software just slipped away.
- I was absorbed in this experience.
- I felt frustrated while using the software. *(Reversed)*
- I found this software confusing to use. *(Reversed)*
- Using this software was taxing.  *(Reversed)*
- This software was attractive.
- This software was aesthetically appealing.
- This software appealed to my senses.
- Using this software was worthwhile.
- My experience was rewarding.
- I felt interested in this experience.

## RiCEv2: Reflection in Creative Experience Questionnaire V2 (Ford and Bryan-Kinns, 2023)

**Considering your recent experience of wAIve, please indicate the extent to which you agree with the following statements:**

*Options: of "Highly Disagree" to "Highly Agree" placed on either end of an 11-point scale.*

- Whilst being creative, I liked to think about my actions and find alternative ways of doing them.
- I considered different ways of doing things.
- I found myself iteratively refining and assessing my creative process.
- I learned many new things about myself during the experience.
- I pondered over the meaning of what I was doing in relation to my personal experience.
- I often reappraised my experiences with the system so I could learn from them.
- I made comparisons within the system to consider alternative ways of doing things.
- I often generated, tested, and revised ideas.
- I made no comparisons within the system to consider alternative ways of doing things. *(Reversed)*

## Additional Items

*These following items were asked to either update RiCE or to get context on questions related to creativity. They are not used to report on the findings in the paper which focuses on Engagement and Reflection*

### Preference of wAIve's Features

**I was provoked the most to reflect when…**
- using a different type of play button.
- a play button would flash.
- a block would fly across the screen.
- using different instruments.
- I used the music suggestions that the computer created.

**Why did you choose the option above as provoking you to reflect the most?**

**I was most engaged when….**
- using a different type of play button.
- a play button would flash.
- a block would fly across the screen.
- using different instruments.
- I used the music suggestions that the computer created.

**Why did you choose the option above as making you the most engaged?**
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### RiCE Version used to develop RiCEV2 (Ford and Bryan-Kinns, 2023)

**Considering your recent experience of wAIve, please indicate the extent to which you agree with the following statements:**
*Options: of "Highly Disagree" to "Highly Agree" placed on either end of an 11-point scale.*
- Whilst being creative, I liked to think about my actions and find alternative ways of doing them.
- I often re-examined things I'd already learnt.
- I considered different ways of doing things.
- I found myself iteratively refining and assessing my creative process.
- I learned many new things about myself during the experience.
- I pondered over the meaning of what I was doing in relation to my personal experience.
- I often reappraised my experiences with the system so I could learn from them.
- I considered how my outputs from the system might be interpreted differently in the future.
- I made comparisons within the system to consider alternative ways of doing things.
- I often generated, tested, and revised ideas.
- I often reflected on my actions to see whether I could have improved on what I did.
- I made no comparisons within the system to consider alternative ways of doing things. *(Reversed)*
- I explored my past experiences as a way of understanding new ideas.
- Whilst creating, I thought back on some of my past experiences.
- Whilst creating, I did not think about my past experiences. *(Reversed)*
- I never explored my past experiences to understand new ideas. *(Reversed)*

**Considering your recent experience of wAIve, please select one from the following pairs below to complete the following sentence: "When doing this task, it's most important that I'm able to…"**

Reflect on my current creative process                          Reflect on and learn new things about myself

Reflect on my current creative process                          Reflect on my past experiences

Reflect on my current creative process                          Reflect on ideas which I tested out whilst using the system

Reflect on and learn new things about myself                          Reflect on ideas which I tested out whilst using the system

Reflect on my past experiences                          Reflect on ideas which I tested out whilst using the system

## Creativity Support Index (Cherry and Latulipe, 2014)

**Please rate your agreement with the following statements.**
*Options: of "Highly Disagree" to "Highly Agree" placed on either end of an 11-point scale.*

- I was satisfied with what I got out of the system or tool.
- It was easy for me to explore many different ideas, options, designs, or outcomes, using this system or tool.
- The system or tool allowed other people to work with me easily.
- I would be happy to use this system or tool on a regular basis.
- I was able to be very creative while doing the activity inside this system or tool.
- My attention was fully tuned to the activity, and I forgot about the system or tool that I was using.
- I enjoyed using the system or tool.
- The system or tool was helpful in allowing me to track different ideas, outcomes, or possibilities.
- What I was able to produce was worth the effort I had to exert to produce it.
- The system or tool allowed me to be very expressive.
- It was really easy to share ideas and designs with other people inside this system or tool.
- I became so absorbed in the activity that I forgot about the system or tool that I was using.

**Considering your recent experience of wAIve, please select one from the following pairs below to complete the following sentence: "When doing this task, it's most important that I'm able to… "**

Explore many different ideas, outcomes or possibilities                          Work with other people

Be creative and expressive                          Produce results that are worth the effort I put in

Enjoy using the system or tool                          Become immersed in the activity

| | |
|---|---|
| Become immersed in the activity | Produce results that are worth the effort I put in |
| Work with other people | Enjoy using the system or tool |
| Produce results that are worth the effort I put in | Explore many different ideas, outcomes, or possibilities |
| Be creative and expressive | Become immersed in the activity |
| Work with other people | Produce results that are worth the effort I put in |
| Be creative and expressive | Enjoy using the system or tool |
| Explore many different ideas, outcomes, or possibilities | Become immersed in the activity |
| Work with other people | Be creative and expressive |
| Produce results that are worth the effort I put in | Enjoy using the system or tool |
| Explore many different ideas, outcomes, or possibilities | Be creative and expressive |
| Work with other people | Become immersed in the activity |
| Explore many different ideas, outcomes, or possibilities | Enjoy using the system or tool |

## Preference of wAIve's Features – Most Creative

**I was most creative when…**
- using a different type of play button.
- a play button would flash.
- a block would fly across the screen.
- using different instruments.
- I used the music suggestions that the computer created.

**Why did you choose the option above as making you the most creative?**

## References

Cherry, E., Latulipe, C., 2014. Quantifying the Creativity Support of Digital Tools through the Creativity Support Index. ACM Trans. Comput.-Hum. Interact. 21. https://doi.org/10.1145/2617588

Ford, C., Bryan-Kinns, N., 2023. Towards a Reflection in Creative Experience Questionnaire, in: Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems, CHI '23. Association for Computing Machinery, New York, NY, USA. https://doi.org/10.1145/3544548.3581077

Grant, A.M., Franklin, J., Langford, P., 2002. The Self-Reflection and Insight Scale: A New Measure of Private Self-consciousness. Soc. Behav. Personal. Int. J. 30, 821–836.

Müllensiefen, D., Gingras, B., Musil, J., Stewart, L., 2014. The Musicality of Non-Musicians: An Index for Assessing Musical Sophistication in the General Population. PLOS ONE 9, 1–23. https://doi.org/10.1371/journal.pone.0089642

O'Brien, H.L., Cairns, P., Hall, M., 2018. A Practical Approach to Measuring User Engagement with the Refined User Engagement Scale (UES) and New UES Short Form. Int. J. Hum.-Comput. Stud. 112, 28–39. https://doi.org/10.1016/j.ijhcs.2018.01.004