

## Section S1—Questionnaire

**Instructions:** Please answer each question

1. Have you ever composed your own music, either by playing an instrument or using music software?
2. Have you ever written your own song lyrics?
3. Have you ever performed in a school music band or choir?
4. Have you participated in a music composition class or workshop?
5. Have you ever created a melody or tune on a musical instrument?
6. Have you used music software or apps to make music?
7. Have you ever shared your music compositions with others?
8. Have you received any feedback or awards for your musical creations?
9. Have you ever played a musical instrument?
10. Have you ever used a digital audio workstation (DAW) to create, edit or produce music?
11. Have you ever written a computer program or code?
12. Have you taken a computer programming class or workshop?
13. Have you used coding platforms, like Scratch or Blockly?
14. Have you created animations or games using programming?
15. Have you shared your coding projects with friends or family?
16. Have you ever used a visual programming tool, like MIT App Inventor?
17. Have you used programming to solve a problem or create something fun?

## Section S2—Questionnaire

**Directions:** Please read each statement carefully and place a tick ‘✓’ in the appropriate box to indicate the extent to which you personally believe the statement is true or valid.

<i>Please tick (✓) <u>one box only</u> for each statement</i>	<i>Very untrue</i> of what I believe	<i>Untrue</i> of what I believe	<i>Somewhat untrue</i> of what I believe	<i>Neutral</i>	<i>Somewhat true</i> of what I believe	<i>True</i> of what I believe	<i>Very true</i> of what I believe
1. I find programming music with Sonic Pi and EarSketch to be an enjoyable activity.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
2. Programming music with Sonic Pi and EarSketch is a fun and engaging way to express creativity.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
3. The process of creating music with Sonic Pi and EarSketch gives me a sense of joy.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
4. I look forward to working on music projects with Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
5. I enjoy experimenting with different sounds and beats in Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
6. Creating music with Sonic Pi and EarSketch is a source of relaxation for me.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
7. I find the act of composing music with Sonic Pi and EarSketch personally satisfying.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
8. Programming music with Sonic Pi and EarSketch is a rewarding experience.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
9. The more I use Sonic Pi and EarSketch, the more I enjoy it.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
10. I get a sense of joy from the music I create with Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
11. Programming music with Sonic Pi and EarSketch is an enjoyable hobby for me.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
12. I often lose track of time when I'm working on music projects with Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
13. I find the process of coding music with Sonic Pi and EarSketch entertaining.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
14. I experience a sense of joy when I successfully create music with Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
15. Creating music with Sonic Pi and EarSketch is a meaningful way for me to express myself.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
16. Programming music with Sonic Pi and EarSketch allows me to effectively communicate my emotions.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
17. I believe that the music I create with Sonic Pi and EarSketch has value.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7

<i>Please tick (✓) <u>one box only</u> for each statement</i>	<i>Very untrue</i> of what I believe	<i>Untrue</i> of what I believe	<i>Somewhat untrue</i> of what I believe	<i>Neutral</i>	<i>Somewhat true</i> of what I believe	<i>True</i> of what I believe	<i>Very true</i> of what I believe
18. The music I create with Sonic Pi and EarSketch is important to me.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
19. Programming music with Sonic Pi and EarSketch helps me connect with others.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
20. I feel that my musical creations with Sonic Pi and EarSketch make a positive contribution to the world.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
21. Programming music with Sonic Pi and EarSketch is an important part of my creative identity.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
22. I am proud of the music I produce with Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
23. The skills I develop through Sonic Pi and EarSketch are personally meaningful.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
24. I believe that music has the power to communicate important messages.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
25. Creating music with Sonic Pi and EarSketch allows me to tell stories.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
26. The music I create with Sonic Pi and EarSketch is personally meaningful to me.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
27. I see music programming as a meaningful form of self-expression.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
28. I am confident in my ability to create music using Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
29. I believe I am competent in programming music using Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
30. I am confident in my understanding of music theory as it relates to Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
31. I can troubleshoot and solve problems effectively when programming music with Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
32. I feel capable of producing high quality music using Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
33. I am confident in my ability to use Sonic Pi and EarSketch to communicate my musical ideas.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
34. I believe I have a good understanding of the technical aspects of Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
35. I feel confident in sharing my Sonic Pi and EarSketch creations with others.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7

36. I have confidence in my creativity when using Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
37. I have confidence in my judgment when making musical decisions with Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
38. I am confident that I can learn and improve my music programming skills with Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
39. I feel competent when collaborating with others on music projects using Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
40. I have a high level of confidence in my abilities related to Sonic Pi and EarSketch.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7

## **Section S3—Interview Guide**

This guide provides a structured framework while allowing flexibility for open-ended responses and follow-up questions.

### **Introduction:**

- Begin by introducing yourself and explaining the purpose of the interview.
- Ensure participants that their responses will remain confidential.
- Request their consent for audio recording if applicable.

### **Background Information:**

1. Can you please tell me about your background in music education and teaching experience?
2. Have you had any formal training or education in music composition or programming?

### **Music Composition Experience:**

3. Have you had personal experiences with music composition, such as composing your own music or songs?
4. Can you describe any significant music composition projects you've worked on in the past?
5. How do you incorporate music composition into your teaching curriculum, if at all?
6. What tools or software do you use for music composition in your teaching?

### **Programming Experience:**

7. Have you ever engaged in music programming or used coding to create music?
8. Have you integrated programming concepts into your music education curriculum?
9. Are there specific programming languages or platforms you're familiar with for music-related programming?

### **Teaching Approaches:**

10. How do you believe music composition and programming can benefit music education?
11. Can you share any examples of how you've seen your students benefit from music composition or programming activities?
12. Are there any challenges or obstacles you've encountered when teaching music composition or programming to your students?

### **Integration of Technology:**

13. What role does technology play in your music education approach, particularly in relation to composition and programming?
14. Are there specific software or tools you find most effective for teaching music composition and programming?

### **Student Engagement:**

15. How do you keep your students engaged and motivated when teaching music composition and programming?
16. Have you noticed any differences in engagement levels between traditional music education and incorporating composition and programming?

### **Professional Development:**

17. Have you participated in any professional development or training related to music composition or programming for educators?
18. What resources or support would you find valuable for enhancing your skills in these areas?

**Future Perspectives:**

19. How do you see the role of music composition and programming evolving in music education in the future?
20. Are there any specific goals or projects you have in mind related to music composition or programming in your teaching?

**Closing:**

21. Is there anything else you'd like to share about your experiences with music composition, programming, or their integration into music education?

Thank the participant for their time and ask if they have any questions or comments for you.