

Music Technology

with Dr Jennifer MacRitchie,
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Talking points

KNOWLEDGE

1. What is dementia?

COMPREHENSION

2. What is the difference between an acoustic musical instrument and a digital musical instrument (DMI)?
3. Why is music beneficial for people living with dementia?
4. Why might someone living with dementia find it difficult to play a traditional acoustic musical instrument, such as violin?

APPLICATION

5. How are the Slider Box, Music Memory Maker and In C Box used by people living with dementia? What features make them dementia-friendly?

ANALYSIS

6. Why is it important that the DMIs developed by the team are co-designed with people living with dementia and their carers?
7. How do you think team members with backgrounds in psychology, design and social care contribute to the creation of dementia-accessible DMIs?
8. How has technology changed the way music is created and consumed?

EVALUATION

9. How do you think the way we interact with music will change in the future as technology continues to advance?
10. What does music mean to you? How has music impacted your life?

Activities

1. **Design an accessible musical instrument or piece of music technology** so that someone with a disability can interact with music.

First, decide what your creation will be (e.g., an adapted acoustic musical instrument, a digital musical instrument, technology to create or listen to music, etc.). Then, consider what disability your instrument or technology will be accessible for (e.g., reduced motor or cognitive ability, loss of a limb, loss of vision, etc.).

How will your instrument or technology be adapted to the specific needs of the user? For example, how could a violin be adapted for someone missing one or both hands? What technology could enable someone who is hard of hearing to participate in group musical activities?

Sketch a design of your instrument or technology, labelling the features that make it accessible for the intended user. If you have the resources available, why not build a prototype of your creation?

2. **Find a career that combines your interests.** At school, Jenni loved music and physics, so she combined her interests to study electronics with music then built a career creating digital musical instruments.

What subjects do you enjoy and what hobbies do you have? What job could combine two of your interests? For example, if you like football and writing, you could become a sports journalist. If you like cycling and physics, you could help design more aerodynamic equipment.

Create a mind map connecting as many of your interests as possible with different potential careers. Which job do you think you would most enjoy?

More resources

- Learn more about the team's project designing new musical technologies for older adults' well-being and watch videos about the research: www.sites.google.com/sheffield.ac.uk/mmm/our-projects/designing-new-musical-technologies-for-older-adults-wellbeing
- Learn more about how the team's project partner, Bela, supports music technology: bela.io
- OHMI (www.ohmi.org.uk) and Drake Music (www.drakemusic.org) are UK-based charities that create accessible musical instruments and technologies.