

Investigating the use of a GN Multi Microphone within a classroom setting and daily life for children with longstanding hearing loss

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danalogic GN



METHOD

Initial fitting

All fitted with Ambio aids and paired with Multi Mic

6-week review

Fine tuning and adjustments completed

Further 6 week review

Postponed due to COVID lockdowns (telephone consultation completed)

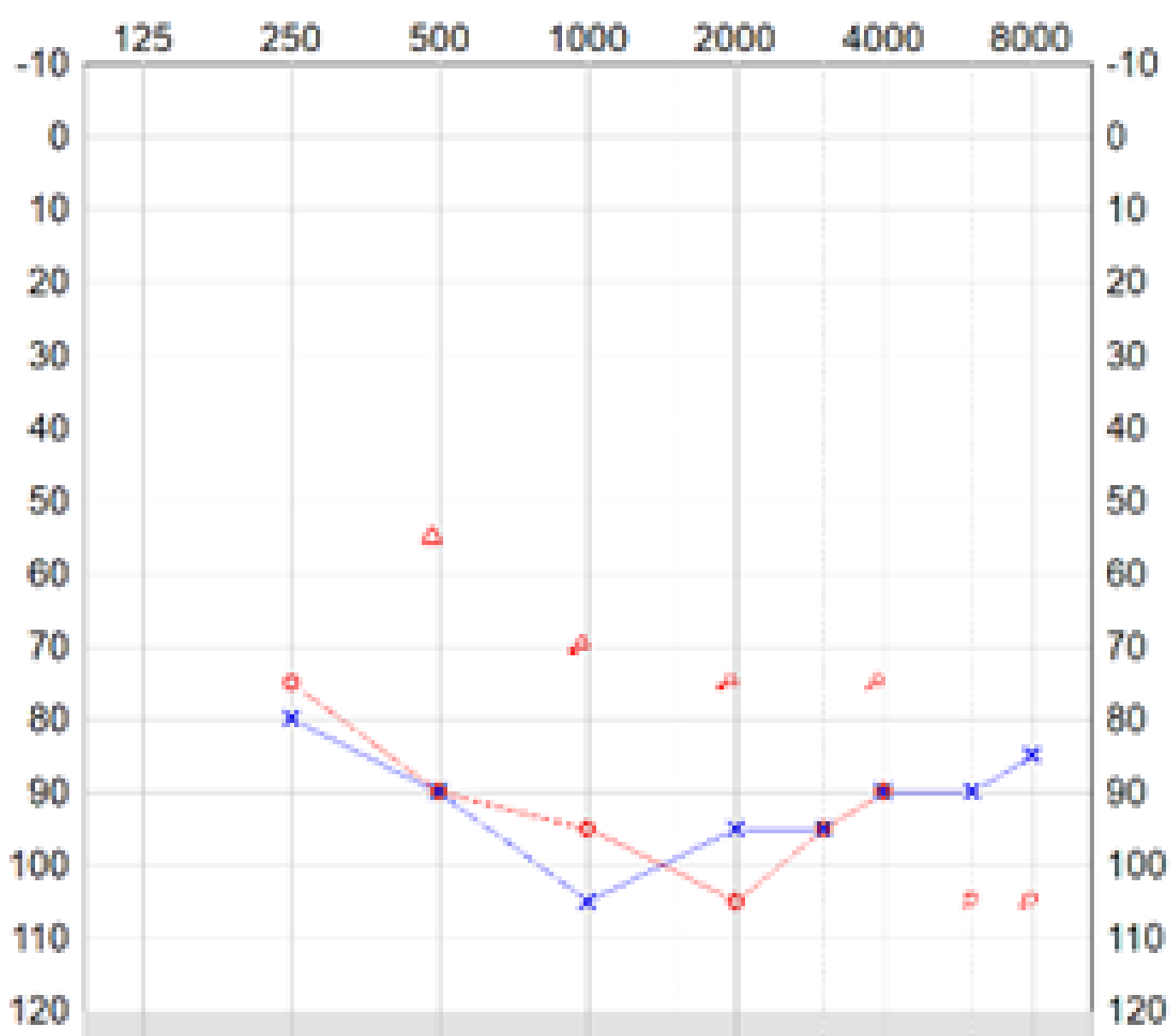
Final 6-month review

After COVID lockdown

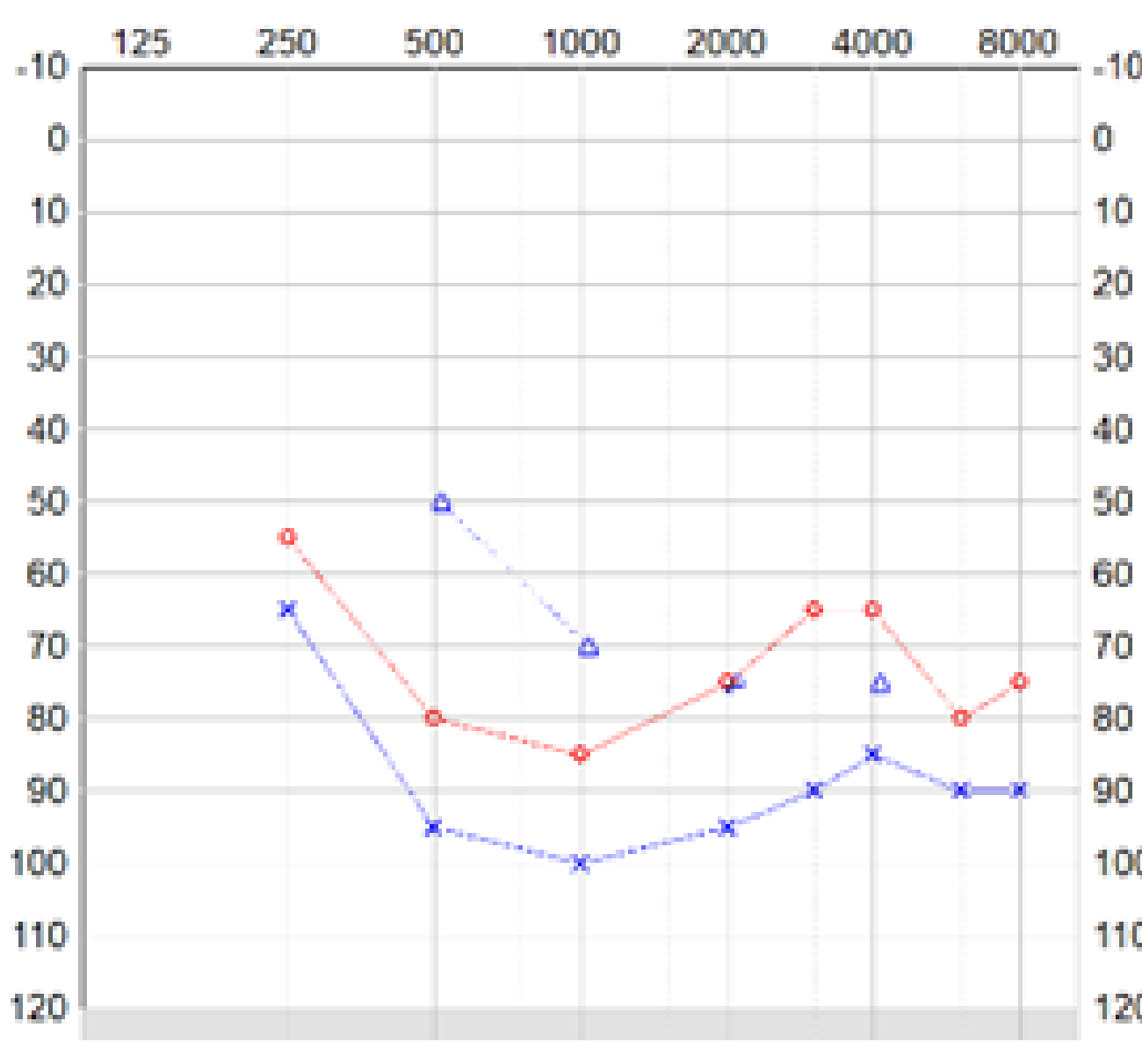
INTRODUCTION

In the United Kingdom, assistive listening devices are widely used in schools for children with hearing loss. FM (frequency modulation) consists of a transmitter and a receiver and uses radio waves to transmit audio signals to the listener. The GN Multi Mic is a wireless streamer that can stream speech and audio directly to a GN compatible hearing aid(s). The objective of this investigation is as follows:

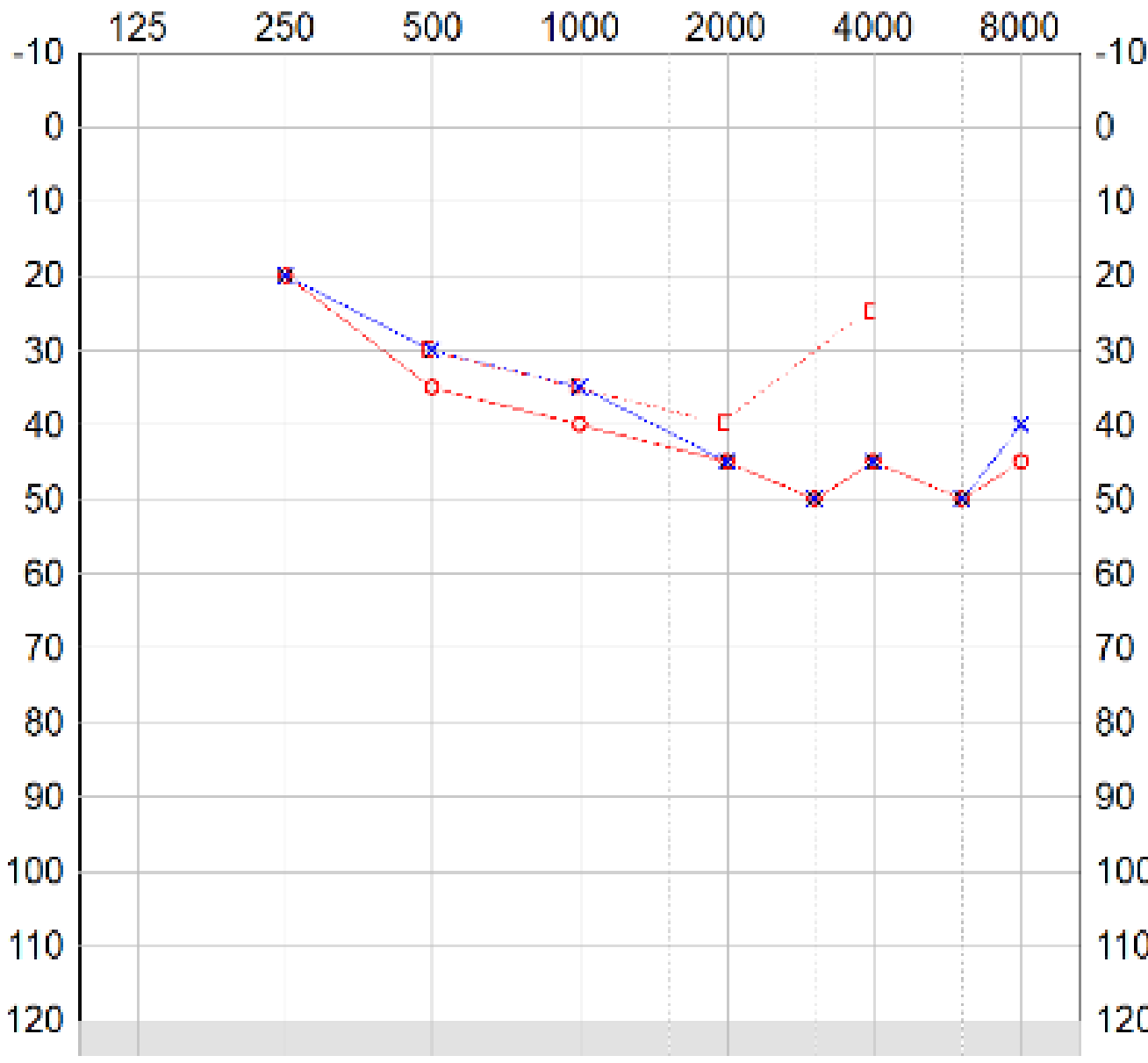
1. To evaluate patient experience of the GN Multi Mic in a classroom setting as well as within an extra curricular setting
2. To evaluate patient experience of the GN Multi Mic in a home setting
3. To evaluate the use of the GN Multi Mic in daily living



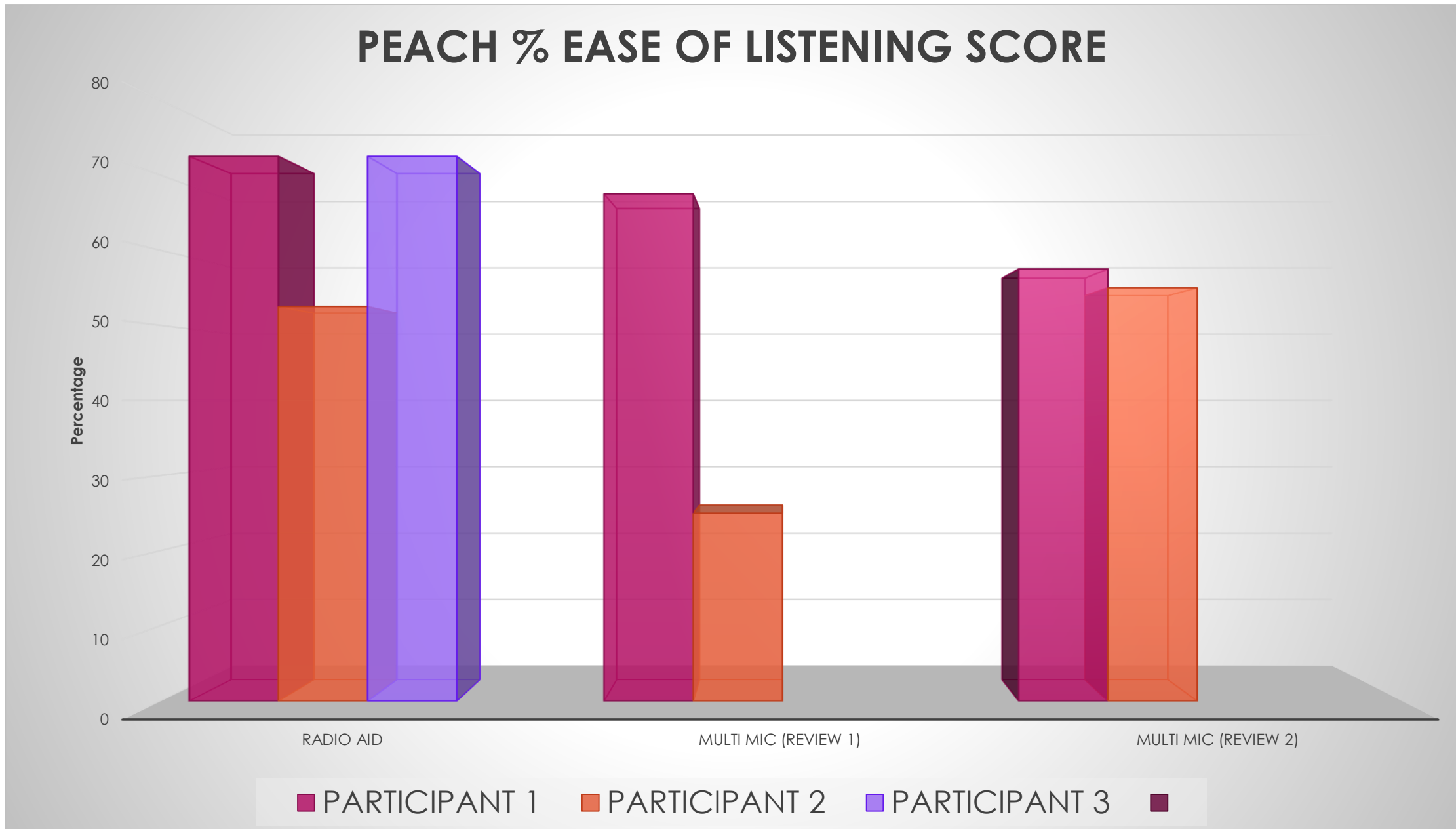
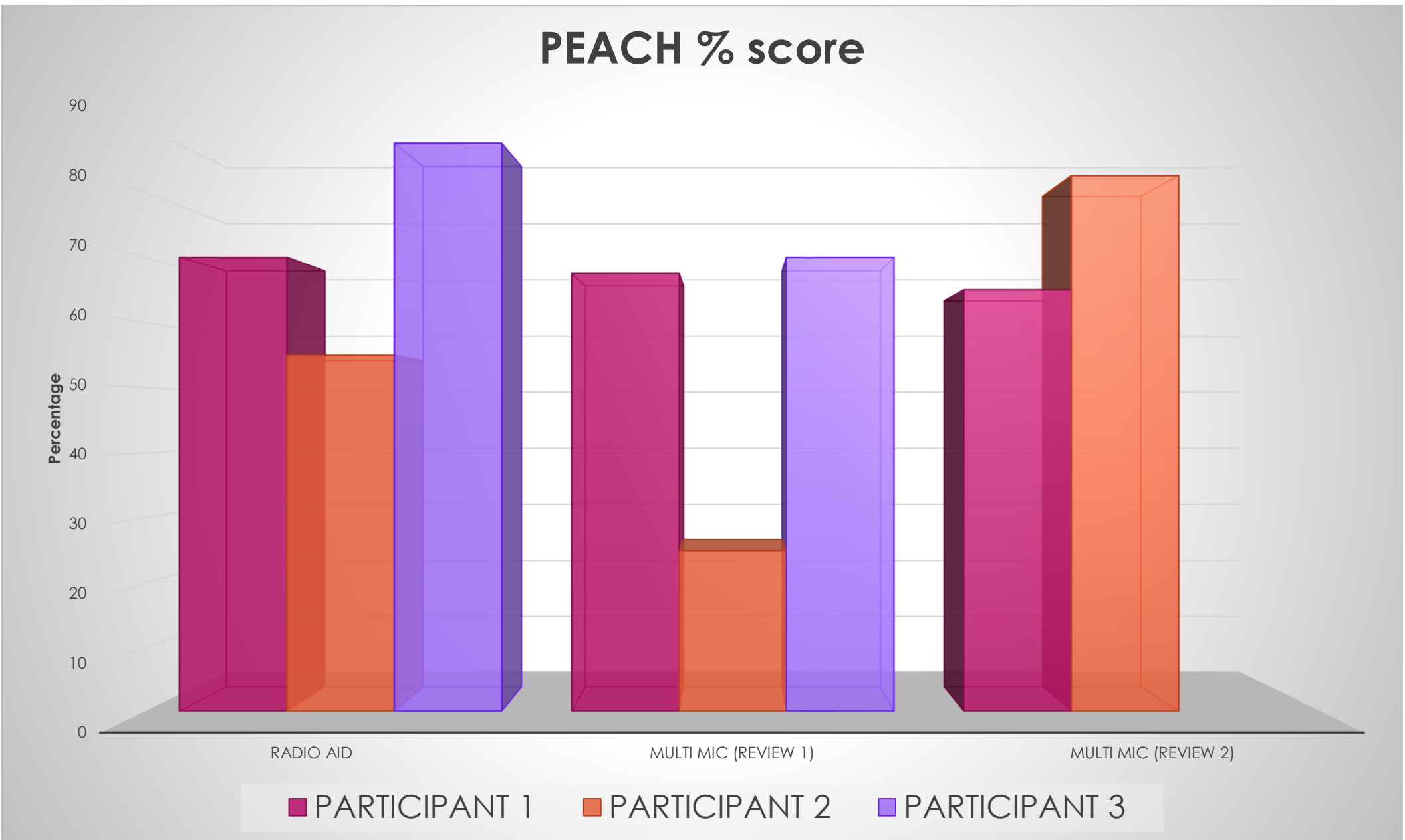
Participant 1



Participant 2



Participant 3



Pros

Cons

| | | |
|----------------------|---|---|
| Participant 1 | <ul style="list-style-type: none">• Taking calls, reports clearer and easier to converse.• Used for listening to music on the phone or laptop• Portable• Mute button• Took ownership• Used during all lessons at school and online• Charging in 1-2 hrs | <ul style="list-style-type: none">• Reduction in use time• Unsure of conference mode• Difficult to hear students in back• Not always muted and can hear unwanted conversations |
| Participant 2 | <ul style="list-style-type: none">• Laptop use with mic• Utilized during online school lessons• Streamed use with PlayStation and online gaming• Successfully used during Arabic lessons with improved pronunciation• Successfully used during extra-curricular activity (Marital Arts) | <ul style="list-style-type: none">• Charging daily due to high usage• Increased background noises when teacher walked away• Conference mode was not beneficial• Required focus when pairing/unpairing• Intermittent use during lockdown |
| Participant 3 | <ul style="list-style-type: none">• Increased use of hearing aids when fitted with GN instruments• Time saver in morning with no additional devices to add on• Good sound quality• Connection to Alexa and iPad | <ul style="list-style-type: none">• Limited range in PE class• Extra equipment required reinstruction to ensure correct usage• Reduction in use time during lockdown• Only used for short time to start |

Summary

- All participants used the devices during lessons & while at home.
- Two eldest participants connected the Multi Mic to telephones, laptops and PlayStation to maximise listening in all situations
- Two participants gave positive feedback on the Multi Mics during COVID lockdown, took full ownership of unpairing/pairing when teachers did not mute
- Challenges of device control could be overcome with further training and support for school teachers and hearing impairment specialist teachers.
- Conference mode did not prove to be beneficial in this review and did not result in reduced use in class from the older participants.
- Decreased usage was only observed due to COVID lockdowns for all participants.
- All participants reported the sound of the Multi Mic to be clear and comfortable.
- One parent remarked on clearer pronunciation of participant's speech with Multi Mic usage.

Conclusion: Multi Mic can be a functional and portable streaming device which is appropriate for a school setting. It benefitted learning both in class and online lessons. Participants and parents engaged in home and extra-curricular use. We noted support and training for all involved would be required to ensure successful use.