

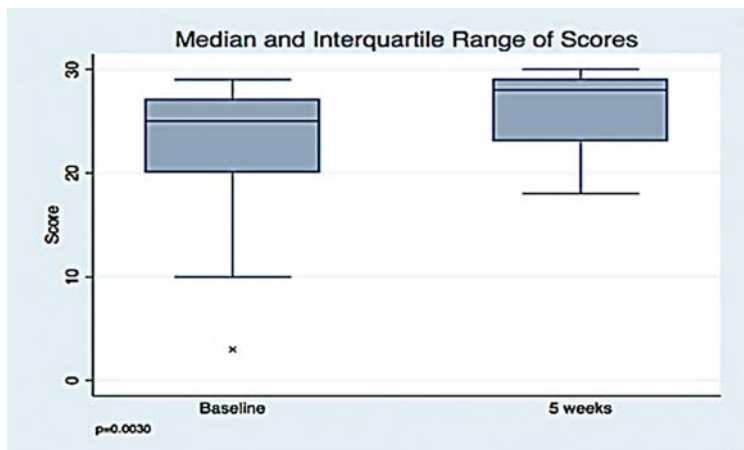
Count on Words

Rachael Lethbridge, QToD, summarises her Master’s study and the resources that can be used by professional peers in deaf education

I have previously written about developing vocabulary in maths, which was published in the BATOD Magazine September 2019. Since then, I have developed Count on Words, a research-based maths vocabulary intervention package. This is being shared freely, supporting many students with low language levels and improving their access to maths.

When I started a Master’s in deaf education, I knew I wanted to base it on maths vocabulary and the assessments we had been using in our department. When I was challenged to justify the words chosen for the assessments, I could only reference professional judgement. I couldn’t find an official word list anywhere, not even from exam boards. This prompted a summer spent cataloging the frequency of all words used in GCSE exam papers, both foundation and higher level. I disregarded command words, carrier language and general knowledge terms which left me with 390 technical words. ‘Value’ was the most frequently used word and ‘graph’ appeared on the greatest number of papers. Neither of these words had been included originally. Lots of these words would be introduced at a primary or even pre-school level such as ‘triangle’ or ‘share’. There were a considerable number of words relating to money and finance for example ‘savings’ and ‘earnings’. I used the 210 most frequently used technical words to write new vocabulary assessments. The next step was to create lessons and resources to support the teaching and learning of these words.

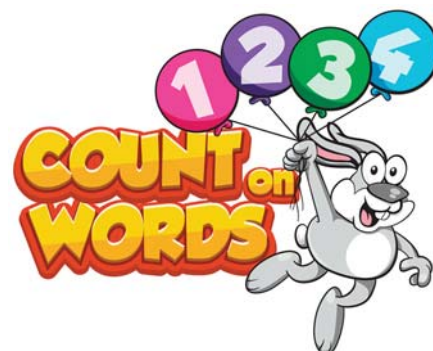
For my study, I focused on the maths topic of Time with 41 deaf students in Year 8 and 9. The intervention consisted of five lessons starting and ending with an assessment of 15 technical words relating to Time.



Research tells us that the most effective methods for teaching vocabulary are to use an explicit approach and to capture the students’ interest, best done through engaging images and games. I did this by choosing an image for each word and then using it in activities like Kim’s Memory Game and Bingo. I also added in some maths jokes. I must admit only the teacher usually found these funny, but they provided an opportunity for discussion. As a QToD in an oral setting, I was very keen to promote conversation, so I included an activity called Mathematically Speaking. Students are shown an image that has links to careers or other subjects, and they are encouraged to discuss what they know. All word forms are explored on word cards eg long, longer, longest and used in games like hangman. After five weeks students showed a statistically significant increase in their vocabulary knowledge. Interestingly, controlling for gender or first language did not have a significant impact.

I was fortunate to be accepted onto the National Association of Independent Schools and Non-Maintained Special Schools (NASS) SEND Incubator, which supported turning school innovations into products or services that could be shared more widely. This gave me the confidence and support to develop Count on Words into a package that others could also benefit from. It pushed me to secure the funding needed to have the lessons reimaged by a graphic designer. This transformed the project. I made the Time lessons available for trial and had fantastic feedback from other QToDs in resource and





bespoke images for each word and worksheets. My research is available to read through the school site and I'd be happy to share the list of 210 most frequently used Maths words with anyone who gets in touch.

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peripatetic roles, including two teachers based in Australia. The intervention has also been used in primary and secondary mainstream settings, and for children with different additional needs such as EAL (English as an additional language) or autism.

The resources are available to download freely from the Mary Hare website under the Centre of Excellence section. The topics of Time, Angles and Shapes and Calculations are complete with further topics in the pipeline. Each topic consists of an assessment, five PowerPoint lessons with



Rachael Lethbridge is the SENDCo at Mary Hare, Assistant Principal and Maths Teacher.

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