iPAD apps to support exploration of sound and use of voice - listening and speaking

The increase in use of the iPAD is encouraging. I love it as a tool and think it has amazing potential often untapped by many of us with not enough time to explore it.

Real life experiences in education are the best but sandwiched in a classroom with limited off-site visits and tension between curriculum and specialism, the iPAD can provide experiences for many not easily accessed otherwise. The world is available at the tap of a screen.

There should however be careful reasoning about use of the device and the choice of app, in the school context at least, observing school protocols and e-safety rules of course. Increasingly one can restrict access to the range of features and apps through the set up process and by password and even cover the home button.

Accessibility is improving all the time - enabling customized gesture for those with additional physical and cognitive need, as well as direct streaming to hearing devices using bluetooth. Many visiting teachers report challenges of using the iPAD in schools and we need to share how some Local Authorities encourage and manage it.

There are a number of apps which can support listening and speaking at different phases. We know both skills are complex, each with its own hierarchical development. The works of Norman Erber[1]-and Susan Allen[2] detail each in turn. Their mantras respectively 'detect, discriminate, identify, comprehend' and 'perceive, process, produce' provide useful reminders of the experiences and challenges we need to offer children and young people in order to encourage good listening and speaking. As Teachers of the Deaf we determine where the pupil is on their respective journey and choose what could support and challenge. The old tools of auditory training and speech production - tone bars, Melodica, music and movement, Auditory Training Unit, feather, balloon are superceded by the multimedia tools of the digital world – images, video, sound level meters, spectrograms, graphic equalisers, splitters and the like. The provision of digital hearing instruments and assistive listening devices passes to us the responsibility to harness their potential.

For some children it is enough to 'switch on' to sound; for others any launch needs a nudge or even a push, plus a visual or kinaesthetic indicator to confirm

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[1] **Auditory Communication for Deaf Children** Norman P. Erber Acer 2011 ISBN 9781742860206

[2] **Auditory Perception Test for the Hearing Impaired (APT/HI)**. Third edition. Susan G. Allen. (2015) San Diego Plural Publishing Inc. ISBN 978-1-59756-590-5.
Auditory Perception Test for the Hearing Impaired – Instruction Manual. Third edition. Susan G. Allen. (2016) Plural Publishing Inc. San Diego
A Guidebook for the Auditory Perception Test for the Hearing Impaired – From Assessment to Intervention. First Edition. Susan G. Allen (Ed.) (2016) Plural Publishing Inc. San Diego ISBN 978-1-59756-486-1

what is happening. Profoundly deaf children, even those implanted, may find it hard to make their first sounds…do they know what they are aiming for? They have to experience the sound before they can produce it; limiting to 'moo' and LING sounds for months or until we hear them back is not the answer. We need to explore a full range of sound so children can appreciate volume, pitch, duration, rhythm in order to discriminate the semitone above, and the vowel from the diphthong. They need to understand the rules of the game, where to stand for the best catch, how hard to throw, the skill of a partner etc. So it is with conversation; how loud is too loud, what is a whisper? How do they learn unless they are shown?

Early listening games and sound effects:
Peekaboo (looking and listening)
My PlayHome (sound effects of washing machine, mixer etc.)
CookieDoodle (conversation and choices, biscuit crunching)
Musicgroup (play and listen to instruments)
Nursery TV1 (action songs)
Auditory Verbal (LING sounds)
Soundly (transport; ball sounds; animals; instruments; human-all with photos)
Animal Sound (in context; play 2 or 3 at once)
What's that sound? (2 or 4 elements sound and photo match game)

Noise making and speech; combine with listening:
Megaphone (make any sound, record it, play back with visuals- amplifier shakes/ pitch trail; compare voices/child's own efforts)
Keezy (record any sounds in a grid format (6 options)-use in a range of ways-matching pairs, classifying, water sounds, odd one out, identification-voices/instruments…syllable length, rhythms)
Speak up and speak up too (simple visual response to sound effort)
Walkie Talkie (speaking from one device to another)
Articulation station (audio game – phonemes/syllables)
Older students:
Decibel 10th (record sound level in dB; see sound graph)
Exploratorium sound uncovered (explorations and explanations-interactive and articles e.g. sounds made by car parts-and why? Waveforms…pitch etc.)
Noise Room for iPAD (sound simulations across environment and social scenes)

Changing sound apps:
Soundrop (altering space changes the sound of the bouncing tone)
Smack Talk (record voice; guinea pig talks back; change pitch and speed to hear the differences; child can control outcomes; fun)
Older students:
Voicer record sound and play with effects-echo, robot etc. Crop and change

Music apps-all age-calls for discrimination, joint attention, concentration, anticipation, rhythm, timing and creativity:
Drum roll
Piano

Finger drums
Older students:
Garage band (Extensive individual or group activities)

Sound apps linked to curriculum:
Pocketphonic (phonic practice)
Clicker apps docs, sentences, connect (audio of word/sentence before selection)
Clicker books (record own voice and sound bites in a story)
A.L.L. (record sentences following a model, save and play back)
Rhyming games (by Skoodal for Oxford Reading Tree)
Say and Spell (by Skoodal for Oxford Reading Tree)

Many of these apps are not games in themselves but need pedagogical thinking and specialist ToD knowledge to set them in the right point on the pathway of each pupil.

Remember to teach the vocabulary to describe similarities and differences.
Promote the connection between listening, lip-reading, speaking and aural feedback as this is pivotal and builds confidence. Provide opportunities for children to be in control, to voice commands; seeing the effect is powerful for a young child.

When listening and speaking don't happen as we'd expect we need to investigate. We want children and young people to be confident in their own listening and speaking ability: to understand their amplification equipment and to know what works and what doesn't and what they could do to help themselves. As Teachers of the Deaf we need to consider what to do differently or additionally.

The best speakers are the best listeners - what are we doing to ensure optimal outcomes? If you wish to add apps or share how you manage use of devices in your context please get in touch: burwood@ewing-foundation.org.uk

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Deaf children with additional needs

References-(footnotes not clear)

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