

## Evidence Base for Handwritingbot

Handwritingbot employs teaching techniques that adhere to the best practices for teaching handwriting, recommended by the [Victorian Education Department](#). Below, you'll find [these recommendations](#) along with instances showcasing how Handwritingbot incorporates these strategies, highlighted in red for clarity.

Even though some students seem to handwrite effortlessly, most students require explicit teaching. Recent research suggests consistent practice which provides students with opportunities to develop emerging skills is most beneficial for developing handwriting fluency (Cahill, 2009; Schlagal, 2014). **Handwritingbot can be integrated into any lesson and easily broadcast to students from a TV on individual devices for daily tasks. It includes explicit teaching of how to form each letter in both audio and video form.**

Handwriting instruction should include:

1. Teacher modelling of the correct formation, sizing and placement of letters. For early learners, writing letters in the air or copying a letter from a correct model is helpful (Graham, 2010). **Handwritingbot's animation speed and pause between letters can be adjusted so students can form the letters in the air, then write them afterwards. It includes explicit teaching of how to form each letter in both audio and video form.**
2. Teacher explanations on how to form letters and words must accompany the modelling. **As above. The audio of how to form each letter is consistent every time students hear it.**
3. Short daily practice sessions which prove to be more effective (and perhaps more interesting) than longer weekly lessons. **Handwritingbot can be integrated into any lesson and easily broadcast to students from a TV or individual devices for daily tasks.**
4. The introduction of letters of the alphabet in formation groups rather than in ABC order. This method removes the chance for the visual confusion of letters that are closely positioned within the alphabet (b/d and p/q). For the Victorian modern cursive handwriting script, this means letters can be taught in the following groups:
  - anticlockwise letters (a, c, d, g, q, e, o, f, s)
  - clockwise letters (m, n, r, x, z, h, k, p)
  - the i family letters (i, t, l, j)
  - the u family letters (u, y, v, w, b)

**Teachers program their own exercises, so teaching in these letter groups is simple.**

Regardless of what order letters are chosen to be taught, it is important that students know the names of individual letters and the sounds that can represent each one. Letter names and their sounds serve as a memory cue and assist the retrieval of the motor-program required to successfully write a given letter (Graham, 2010).

**Handwritingbot audio includes naming the letter before describing how to form it. Alternative audio includes just naming the letter without the formation instructions. The letter sounds instead of names will be an option in 2024!**

Other considerations in the teaching of writing include:

- Using mnemonics to prompt student letter formation (for example, begin at the top, tail letters go under the line, 't' is a teenager not fully grown or 'w' is like a wiggly worm). **Handwritingbot audio includes mnemonics for each letter.**
- Teachers capitalising on the opportunities to teach handwriting through the writing practices of modelled, shared, interactive, guided and independent writing. **Teachers could *model* a recount using Handwritingbot; create a *shared* story with students; students can *interactively* create texts together; teachers can *guide* them on what to write before; students can *independently* type/dictate on their device, then copy what has been produced using best practise handwriting.**
- Linking handwriting to other curriculum areas so that it is meaningful rather than just skill and drill. **Examples include modelling of writing prompts on a TV; sending exercises to students' devices such as spelling lists; students can dictate the answer to a maths problem such as 'what might you be doing at 8am?' then copy the animation.**
- Ensuring handwriting does not take the place of writing. Students should also have an opportunity to write regularly for meaning and purpose. **Handwritingbot simplifies the writing process by bypassing the step of translating thoughts into individual letters. Students can express their ideas verbally, have Handwritingbot read their words aloud, then proceed to write with accurate spelling and handwriting. This approach is particularly beneficial for novice and reluctant writers, enabling them to experience success, boost their confidence and employ best-practices in their writing.**

Information about the importance of handwriting versus keyboarding can be found [here](#)