

<b>STEC Guidance Detailed Assessment of Speed of Handwriting - 2nd Edition June 2024</b>	
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<b>Publisher:</b>	Pearson
<b>Date of Standardisation:</b>	August 2021 to February 2023 This is updating the DASH (2007) and DASH 17+ (2010)
<b>Age Range:</b>	8-25 years (different to previous edition covering range DASH: 9-16:11 and the DASH 17+: 17-25.11)
<b>Access Level:</b>	All professionals including class teachers
<b>Cost</b>	£209.74 inc VAT

### What is included:

Manual, 25 record forms,

Reproducible cards: copy sentence cards, Graphic speed Card, Free writing Topic cards and lined writing card.

Assessors need to have a timer, paper and pens

### Brief overview of the battery

- Measures writing speeds, handwriting style, visuo-motor integrated speeds under different conditions
- 4 core tasks: sentence copy tasks (Best and Fast), Alphabet Writing and Free Writing, with supplementary Graphic Speed subtest.
- Total administration time for all subtests is approx. 30 minutes
- All evidence is from the timed writing of the pupil/young person
- No parallel forms but:
  - there is a choice of two copying sentences for ages 8-16years and two for ages 17-25 years. The same sentence must always be used for both the Copy Best and Copy Fast tasks
  - for the Free Writing task there is a choice of two topics: the first of these is the same topic as that in DASH/DASH 17+ **and it is suggested that this is used in most circumstances**, with an additional topic to be used when there are greater demands on the examinee.

### Scoring:

- Scaled scores for each subtest with a mean of 10 and a standard deviation of 3. And a total composite made as a standard score using the sum of scaled scores of the 4 core tasks (copy tasks, alphabet writing and free writing) with a mean of 100 and SD of 15 and including confidence intervals

- Separate normative data for the two free writing tasks.
- 95% confidence interval should be used - SASC guidance
- Assessor can compare the copy fast and best using percentiles, see page 121 of the Manual; Scores that lie at or below 15th percentile reflect a lower-than-average difference score, reflecting no or little increase in handwriting speed from Copy Best to Copy Fast.
- Rapid changes up to 16 and then much slower so single year normative data for up to 16 and then for multiple year groups thereafter.

**Qualitative assessment** is a key part, not just the scores, and the manual provides useful guidance is given on what to look for. This will include pen grip, posture, pressure of pen, signs of pain or fatigue, fluency with maintaining writing and the fluency of formulating the sentences to write in free writing. Also, in free writing, the inclusion of punctuation, spelling, grammar, expression, vocabulary. Helpful guidance is also given on examining legibility – the 7Ss (p76-77).

Also motor sequence of writing letters, description of script e.g., mix of joined up letters and printed letters, sizing, spacing, sitting on line.

*Helpful resources to cover further this aspect:*

The Handwriting Legibility Scale (2018)

<https://www.brookes.ac.uk/phpd/research/resources/handwriting-legibility-scale>

and the Writing Quality Scale (2023b)

[https://www.researchgate.net/publication/370420067\\_The\\_writing\\_quality\\_scale\\_WQS](https://www.researchgate.net/publication/370420067_The_writing_quality_scale_WQS)

## Points to Consider

- **Rigour of standardisation:** Sample gave normative data, from Australia, New Zealand and UK - regions considered similar demographically, education systems and SEN provision. Comparison of these regions were compared and found to be similar.  
762 (UK 368, Aust and NZ 394) made up of:  
  
533 in younger age group 8-16 years and 229 in older age group 17-25 years.  
377 males and 385 females,  
Mostly urban, south England, white ethnicity
- **Appropriate representation of age range, socio-economic backgrounds, ethnicity, gender** - some bias e.g. more urban than rural, weighted on white ethnicity than other, similar male and female and good spread over ages range.

- **No significant difference between scores achieved by those in or not in education setting in 17–25-year age range**
- **Score intercorrelations:** Findings ranging from .52 to .77 supported correlations between the 4 core subtests, so scoring using the 4 core tasks to compute the total standard score and then use of the graphic speed task as a supplementary measure.
- **That this overall standard score demonstrates a global indicator of handwriting speed was confirmed through factor analysis.**
- **Reliability:** Test-retest reliability for 130 participants ranging from .68 to .89 for individual tasks. Lowest stability coefficient was for Graphic Speed for younger and older ages (.68 and .74 respectively)
- **Essential to consult the Manual which gives further information about the assessment and analysing the responses and to ensure familiarity.** There is emphasis on the importance of qualitative assessment from the assessment. In particular:
  - attention to task, sustaining attention over the free writing task,
  - fluency with thinking what to write/how to express thoughts.
  - Handwriting mechanics (legibility, motor planning of letter formation)
- **Group v individual administration**

Mean scores for all tasks were slightly higher for those tested individually compared to group setting, particularly for 11-15 age group, but not statistically significant for Copy Best, Alphabet Writing, Free Writing and Graphic Speed but were significant for Copy Fast ( $p < .01$ ) and for total standard score ( $p < .05$ ), but the individually assessed accurately represented performance on the DASH-2 across the country.
- There are no norms for typing speeds for copywriting and also free writing, to directly compare, when necessary, against the handwriting speeds.
- DASH-2 shows that there has been a population wide slowing down of handwriting speed since the standardisation of DASH/DASH 17+
- The manual recommends that “all five of the DASH subtests are administered during an assessment” as “the sum of the 4 core tasks provides the most reliable overall measure of legible handwriting speed. The Graphic Speed score adds information about fine motor skills that is important when looking in depth at an individual’s handwriting performance.” (p78)