# A review of the literature into effective practice in teaching literacy through Braille

## Introduction

The teaching of literacy through the medium of braillle has been a topic of interest for researchers and educators for many years. However it is debatable to what extent evidence from psychological and educational research has filtered through to teachers and informed their practice. Findings from some UK studies suggest considerable variation in approaches to the teaching of braillle literacy, for example in the timing of the introduction of contractions, and in the role played by teaching assistants (TAs) in the delivery of braillle teaching. There is also a wealth of information and resources on developing children's braille reading skills but there has been little research into the efficacy of these approaches. RNIB therefore commissioned researchers from the Visual Impairment Centre for Teaching and Research (VICTAR) at the university of Birmingham to:

1. Review the literature into teaching literacy through braillle.
2. Collate relevant UK- based braille reading schemes,
3. Present the findings so that they would be of practical use for teachers in their approaches to the teaching of literacy through braille to young children.

## Method

Following an initial scan of literature related to braille since the year 2000, the authors generated four research questions that they felt reflected key contemporary issues facing teachers:

1. Phonological training: What phonological training do blind children and young people need to support the development of their literacy through braille?
2. Uncontracted and contracted Braille: Should we start by teaching un-contracted or contracted braille?
3. Technology for braille users: What is the relationship between advances in technology and the development of learning through braille?
4. Assessment and choosing media: What are the key criteria for deciding whether braille is (or is not) an appropriate route for literacy for a child or young person?

The collation of UK-based braille reading schemes involved:

* the gathering a list of available reading schemes based upon the authors’ knowledge and internet searches;
* checking the completeness of this list through liaison with the project consultants, and a survey of 31 teachers.

## Key messages from the research

### 1. Phonological training

* There is general support in the literature that phonological instruction is beneficial for beginning braille readers and that there are key similarities in the underlying processes of reading development for Braille readers and print readers
* There are some concerns in the literature that the logographic nature of contracted braille complicates the development of phonological skills and this has been taken as evidence in favour of uncontracted braille. However, further research is needed to substantiate this claim

### 2. Uncontracted and contracted braille

* Although there are arguments for both the early and late introduction of contractions, sufficient empirical evidence does not yet exist to resolve the debate conclusively:
* Concerns that starting learning to read through **uncontracted** braille holds back reading because children having to re-learn words in different (contracted) forms seem unduly pessimistic. There is currently insufficient conclusive evidence to support the view that uncontracted braille impacts negatively on reading speed, reading accuracy, comprehension, and spelling.
* Concerns that learning through **contracted** braille from the start holds back development of social interaction also seems unfounded, nor is there any persuasive evidence for the view that contracted braille inhibits fluency in the development of hand movements or spelling.
* There is general agreement that instruction needs to focus on reading processes, regardless of how or when contractions are introduced.

### 3. Technology for braille users

* There is no evidence in the research literature to support the view that technology has an adverse effect on the development of literacy through braille, or that it reduces the relevance of braille literacy skills.
* There is surprisingly little research into the potential of digital technology to support the development of early literacy through braille. The evidence does suggest that digital technology can play a key role in supporting the consolidation of braille literacy skills.

### 4. Assessment and choosing media.

* Deciding whether Braille is an appropriate route to literacy is complex and involves many issues. The re-development of the 'Learning Media Assessment' (LMA) (Koenig and Holbrook, 1995) would be a useful step forward in helping to inform decision making.
* The choice of reading media for children with additional learning difficulties presents particular challenges.
* Learning to read through Braille and print in combination appears to be a legitimate, successful and sensitive route to literacy for some children and young people.
* The accurate assessment of literacy performance is important for informing literacy teaching.
* In the UK, the most up to date assessment tool is the braille version of the NARA (Greaney et al, 1997) and this appears to be unique in that it has been standardised for braille readers *and* print readers. It would need updating to incorporate recent developments to contracted braille and / or uncontracted braille / and perhaps UEB.
* No broader standard assessment of braille literacy which incorporates writing appears to exist in the UK

### 5. Other issues

### Support services: There are few (if any) standards or guidelines for services or schools of what broad approaches to the teaching of literacy through braille might be expected. Such guidance would be helpful, especially given the shift of balance of control for the financing of support (from services to schools) in the near future.

* **Numbers of children:** Only a small proportion of children who are visually impaired read braille, so professionals will often have little experience of, or opportunity for, teaching literacy through braille. Professional training programmes offer some tuition on the topic of teaching literacy through braille but: 1) it may have only been covered at a relatively introductory level and 2) for many teachers this training may have happened many years ago and may have been largely forgotten through lack of use.
* **Teaching resources:** The move towards group work and more formal ‘reading schemes’ in the classroom can present dilemmas for teaching of literacy through braille. There appears to be a lack of guidance and appropriately structured reading material in relation to teaching literacy through braille specifically in the mainstream classroom, and this is particularly acute if children are taught uncontracted braille initially.
* **Other groups:** The particular needs of children who learn braille having already learnt to read through print have not been explored in any depth in this review. It may be that the development of further resources is needed, but this needs clarification.
* The particular needs of children with learning difficulties / complex needs and how they could be taught literacy through braille have not been explored in any depth in this review. It is likely that further research is needed into the efficacy of different ‘functional’ approaches to teaching which may be suitable for these children and young people.

## In summary

* This report provides a comprehensive review of the research evidence into teaching literacy through braille to young children.
* The findings are presented in a way that makes them of practical use for teachers in their approaches to the teaching of literacy through braille to young children.
* While the main focus of the review was 4 main research questions, the review has also identified other topics that warrant further investigation.
* The findings have led to 10 recommendations aimed at policy makers, training providers and local education services

To download the full research report visit: <http://www.rnib.org.uk/aboutus/Research/reports/education/Pages/braille_review.aspx>

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