Teaching braille to children

by Sue Keil

This research looked at the population of children learning braille in Britain, where they are being educated, and issues concerned with teaching braille and with training of teachers of braille. A national postal questionnaire survey of local education authority (LEA) visual impairment (VI) advisory services and one specialist school for blind and partially sighted pupils suggested that braillists constitute a diverse population that includes many pupils with other difficulties in addition to a severe visual impairment. The studies provided examples of difference models of support for braillists and demonstrated that braillists can be educated in a variety of contexts. The findings highlight the need for further research into teaching braille literacy and the literacy needs of pupils with learning difficulties in addition to a severe visual impairment. A need for a range of training for teachers of the visually impaired and of support staff was also identified.

Introduction

For some years a debate has been waged in the USA literature about possible reasons for a decline in the number of children learning braille, along with a perceived decline in the standards of American pupils' braille reading and writing and in standards of braille teaching (Rex, 1989; Schroeder, 1989; Stephens, 1989; Wittenstein & Pardee, 1996). In the UK, anecdotal reports had been reaching RNIB of children with very severe visual impairments being taught to read print sizes of over 48pt when braille would have been a more appropriate reading medium. Reports had also been received by RNIB of a reduction in the standards of braille literacy among some pupils who do read braille. This had led to the concern by some people that the UK might be following a similar trend to that reported in the USA.

In response to these concerns, during 2002 RNIB's education and employment research department carried out a research study with the aim of exploring issues surrounding the perceived decline in numbers of children learning braille and in the teaching of braille literacy. The study was designed to address the research questions to do with:

1. How many children in the early years, primary and secondary age groups in England, Scotland and Wales are learning braille?
2. Where are braillists being educated?
3. Who teaches braille?
4. What type of training have teachers and learning support assistants had in teaching braille literacy?
5. How are braillists supported (teaching and non-teaching support)?
6. What policies do LEAs and schools have towards braillists?
7. What plans and general strategies do LEAs and schools have for particular groups of children who read and write using braille:
   a) young children whose access to literacy is through braille?
   b) older secondary-age pupils who have been using braille from an early age?
8. How do LEA VI services and schools assess pupils' progress in braille?
9. Which particular standards/guidelines are being followed in LEAs and schools by those who produce their own braille materials for use by the pupils they support?
10. Identifying models of delivery of braille teaching provision.

This paper gives a summary of findings relating to research questions 1 to 4.

Methodology

Given the range of research questions, two complementary methodological approaches were used: a national postal questionnaire survey of local education authority visual impairment advisory services, and case studies of four LEA VI advisory services and one specialist school for blind and partially sighted pupils. The aim of the questionnaire was to find out the number of braillists in England, Scotland and Wales, where they are being educated, who is teaching them, and what type of training their teachers and support staff have received. The case studies were intended to explore in detail how braille

teaching is provided to children in different settings and why provision is organised in this particular way, enabling us to look at different policies and practices in relation to the contexts in which they were located. It was also hoped that they would provide contextual data to inform the findings from the questionnaire survey.

Questionnaire survey
The questions relating to the population of braillists were included in a questionnaire-based national survey of LEA VI advisory services and specialists schools for blind and partially sighted pupils in England, Scotland and Wales. Questionnaires were mailed to VI services and specialist schools in January/February 2002.

Case studies
Using an embedded multi-case study design (Yin, 1994) five separate case studies, each with a number of sub-units (or embedded units) of analysis, were carried out. The case studies were of four LEA VI advisory services and one specialist school for blind and partially sighted pupils. Because the main aim of the case studies was to develop theory, as opposed to testing an existing theory, an exploratory/descriptive design was used.

Methods of analysis
Quantitive analysis of the questionnaire survey responses was undertaken using SPSS for Windows.

For the case studies, a cross-case analysis was undertaken, using the interview schedule to provide categories for analysis. This method of analysis was selected rather than single-case reports to ensure anonymity of the participating LEA VI services and schools (Yin, 1994, p.144). A manual content analysis was used to identify key issues within each theme by cross-referencing across the individual case studies.

Findings

Numbers of children in England, Scotland and Wales who are learning braille
Results from the questionnaire survey, based upon information provided by 106 LEA VI advisory services and extrapolated from a population base of 52%, indicated that there were approximately 850 braillists up to the age of 16 in England, Scotland and Wales in 2002. This represents around 4% of the population of blind and partially sighted children between the ages of five and 16. A smaller proportion (2%) of children under the age of five years as being in the early stages of learning braille, or acquiring pre-braille skills. This might be expected as some children would have been in the process of being assessed and a decision yet to be made concerning their future reading medium.

These data reflect the findings from RNIB research carried out in 1997 (Clunies Ross, Franklin & Keil, 1999) suggesting that in the past five years the overall proportion of children learning braille in England, Scotland and Wales has remained relatively stable.

A common emergent theme across the case studies was the diversity of the population of braillists, and in particular the high proportion of children learning braille who had other difficulties in addition to a severe visual impairment. Thirty-three out of 85 braillists identified in the case studies had additional needs. These included pupils with mild, moderate or even severe learning difficulties, autism, behavioural difficulties, cerebral palsy, specific physical impairments that affected the child's co-ordination or ability to use his or her hands and hearing impairment. There were also a few pupils with specific learning difficulties such as literacy problems, or whose pattern of braille learning had suggested to their teachers that they suffered from 'braille dyslexia'.

Although the case studies were not designed to produce findings that could be generalised to the whole population, the fact that braillists with additional needs were found in all except the smallest LEAs suggests that this may reflect the wider picture. This view is supported by findings from research carried out in the south-west region of England (Johnston, 2002, personal communication). It is also notable that the questionnaire survey found that of the total population of visually impaired children and young people up to the age of 16 in England, Scotland and Wales, around one in two had additional disabilities.

Where braillists are being educated
Data from 97 LEAs showed that the majority of braillists (71%) were being educated in mainstream or resourced mainstream schools, although the proportion was higher for primary pupils (83%) than for secondary-age pupils (59%). A higher proportion of secondary-age braillists was being educated in specialist schools for blind and partially sighted pupils: 35% compared with only 15% of primary-age braillists. These findings are detailed in Table 1.

Comparison with the rest of the visually impaired population in the same 97 LEAs indicated that braillists were more likely to be educated outside the LEA; 22% of braillists were educated outside the

LEA compared with only 6% of the total visually impaired population (see Table 2).

A context for these findings is provided by the case studies. The case study LEAs had different placement policies, ranging from full inclusion of braillists into local mainstream schools to a policy of placing all braillists in resourced mainstream schools. Factors leading to a decision to place individual braillists in specialist schools for blind and partially sighted pupils were not explored, although there was some indication that parental choice played a part.

Type of placement	No. of pupils educated locally in LEA		No. of pupils educated outside LEA	
	No. % aged 11–16	No. % aged 5–10+	No. % aged 11–16	No. % aged 5–10+
Mainstream school	47	57	<0.5	<0.5
Mainstream school resourced for VI pupils	7	4	1	<0.5
Specialist school for VI pupils	1	1	5	2
Other special school (not VI) e.g. PH, SLD, HI	32	31.5	1.5	1
Other type of school or placement	1	1.5	1	<0.5
Not known	2	2	<0.5	<0.5
Total percentage of pupils in each age group	91	97	9	3
Total number of pupils	4,303	5,642	443	201

Table 1: Where blind and partially sighted pupils in England, Scotland and Wales were being educated in 2002 (n=97 LEAs)

Type of placement	No. of pupils educated locally in LEA		No. of pupils educated outside LEA	
	No. % aged 11–16	No. % aged 5–10+	No. % aged 11–16	No. % aged 5–10+
Mainstream school	17	49	4	0
Mainstream school resourced for VI pupils	33	33	6	1
Specialist school for VI pupils	11	9	25	7
Other special school (not VI) e.g. PH, SLD, HI	3	<0.5	<0.5	<0.5
Other type of school or placement	<0.5	0	0	<0.5
Not known	1	0	0	<0.5
Total percentage of pupils in each age group	65	91	35	9
Total number of pupils	136	188	73	19

Table 2: Where pupils using braille as their main literacy format in England, Scotland and Wales were being educated in 2002 (n=97 LEAs)

Who teaches braille?
Questionnaire findings indicated that the professional most likely to be responsible both for planning and supervising braille lessons and for direct teaching was the peripatetic advisory teacher for the visually impaired. This is not surprising in view of the large proportion of braillists in mainstream schools. However, there was also evidence from the questionnaire survey and the case studies that in many LEAs teaching assistants also play a central role in teaching braille literacy.

Training in teaching of braille
A need for a wide range of training opportunities for teachers of braille and for teaching assistants who support braillists was a second emergent theme across the case studies. There was almost unanimous agreement that courses leading to qualification as a qualified teacher of the visually impaired (QTVI) should include an element in teaching braille literacy. This is of particular importance for secondary trained teachers who, in their role as teachers of pupils with visual impairment, are likely to be responsible for primary-age pupils, as their initial teacher training would not have covered principles of teaching literacy.

Due in part to the low incidence of pupils who use braille as their primary format for reading and writing, many teachers may not encounter a braillist for some time following their QTVI training. This highlights a need for refresher training to be made available. In fact, a need for both initial and refresher training in the following areas was identified by the research: teaching braille literacy; teaching braille to older, adventitiously blind pupils; teaching braille to pupils with learning difficulties; teaching braille mathematics; specialist Braille Codes; ICT for braillists; and presentation and layout of braille documents.

Conclusion

Evidence from the questionnaire survey suggests that the population of children learning and using braille in England, Scotland and Wales has remained relatively stable over the past five years. The questionnaire survey also revealed that the majority of braillists are being educated in the mainstream sector, although in comparison with the visually impaired pupils population as a whole, braillists are more likely to be educated outside their home LEA. Findings from the case studies suggest that a substantial minority of braillists up to the age of 16 may have additional needs. There is a need for further research to look specifically at the literacy needs of educationally blind pupils who have additional learning difficulties.

Closely allied to standards of braille literacy is the range and quality of training available to teachers

and teaching assistants who teach braille or who provide curriculum support for braillists. The research identified a need for initial and refresher training in the Braille Codes and in teaching braille literacy.

The case studies provided models of braille teaching provision, demonstrating that braillists can be educated successfully in a variety of contexts, provided there is appropriate organisation of specialist staff, adequate training for staff and properly targeted funding.

The findings have led within the RNIB to a number of recommendations for future research and training provision.

Copies of the full report can be found on RNIB's web page or obtained from Education and Employment Research Department, RNIB, 105 Judd Street, London WC1H 9NE.

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