

## **SECTION 3 APPROXIMATE NUMBERS OF PUPILS**

**Objective 3: To identify the approximate number of pupils who have identified support needs in accessing printed materials and who may benefit from alternatives to reading and writing text.**

**Outcome: Information acquired from multiple sources on the number of pupils with additional support needs who have difficulty accessing printed materials or writing and recording.**

### **Summary**

- 1) Official Scottish Executive and Scottish Qualification Authority (SQA) returns converge on a core cohort of around 4-5% (over 34,000) of pupils aged 5-18 who may benefit from provision of materials in alternative formats, either in addition to or instead of standard text.
- 2) Within this 4-5%, those with a significant hearing impairment or a significant visual impairment are in the minority. Moderate learning difficulties (21.3%) and specific learning difficulties (20.9%) are the most common reasons reported for having a support plan; while 3.8% of the 34,680 pupils have a significant physical or motor impairment, and 1.5% have a significant visual impairment as their main difficulty in learning.
- 3) Scottish Qualification Authority returns indicate an increase in the percentage of pupils sitting examinations who require alternative Assessment Arrangements, from under 6% in 2003 to over 7% (10,650) in 2006. Comparing 1995 with 2006 there has been a 340% increase in requests.
- 4) The proportion of candidates who request alternative assessment arrangements falls as the level of the examinations increases (e.g. proportionately fewer requests for Highers than for Standard Grades). This may indicate either greater difficulty for candidates to demonstrate their knowledge and understanding or, pupils may be less able to attempt higher level awards.
- 5) A variety of evidence suggests that an additional 10% of pupils (approx. 70,000) have difficulty following a standard curriculum or demonstrating their knowledge and understanding. Not all will need or could benefit from access to materials in different formats though a proportion of this broader group of learners may benefit. A model of service delivery to deliver such formats for one group of pupils – those with a support plan in place – should not prevent capacity building so that others, without a support plan, may also benefit.

## Background to Section 3

There is as yet no central record held of the number and profile of pupils who have difficulty accessing printed materials or writing. There are a number of reasons why these figures are not readily available or, if they are available, can be open to different interpretations. As we will see, a framework based around identifying, assessing and making provision for pupils' additional support needs has the potential to offer a way of understanding what the effect of impairments can be rather than focusing on the impairments themselves. For information of this type to become useful for the purposes of planning service delivery there needs to be a change in the type of statistical returns provided by schools and authorities to the Scottish Executive. One of the spin-offs of this report is, we hope, that it will help identify the sort of information that will be useful.

### Methods used

Because no centralised source of statistics on support needs was available we took a number of different approaches to ascertain approximate figures for the numbers of pupils who experience difficulties in accessing materials. We did this by:

1. Finding out the numbers of pupils who have Records of Needs<sup>10</sup> and / or Individualised Educational Programmes (IEP) and the main difficulty in learning that led to a Record or IEP.
2. Establishing the nature of additional support needs, in particular those which relate to literacy, of those for whom a Record or IEP is available. Taken together (1) and (2) provide a core set of those who are most likely to have some form of difficulty in accessing the curriculum or in demonstrating their knowledge or understanding. For reasons that we will discuss the figures are likely to be an underestimate.
3. Obtaining the numbers of pupils who require special or alternative assessment arrangements to sit Scottish Qualifications Authority examinations and the reasons for requests.
4. Obtaining estimates for National Assessment Board (NAB) returns for all pupils.
5. Approaching sample local authorities to determine approximate numbers of pupils who on entering secondary school had significant<sup>11</sup> literacy difficulties as assessed by standardised testing.
6. Approaching a small number of sample schools to find out how many pupils on entering S1 have significant difficulties accessing print or writing and recording their work.
7. Sending out questionnaires to schools to invite comment on numbers of pupils who experience difficulties in accessing curriculum resources.
8. Estimating numbers undertaking 5-14 testing for whom results indicate performance significantly below average for their age.

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<sup>10</sup> The Educational (Additional Support for Learning) (Scotland) Act 2004 and Code of Practice introduced a new legislative framework, ending the use of Records of Needs. The act came into force on 14 November 2005 therefore data collected in September 2005 reflects the earlier legislative framework of Records of Needs. IEPs continue to be part of the new framework of additional support needs.

<sup>11</sup> The term 'significant' is used in a statistical sense of those who are at least one or two standard deviations below the average reading level for that age.

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9. Ascertaining from sample service provider(s) the number of pupils in their caseload and literacy support needs of that caseload.
  10. Ascertaining numbers of pupils leaving school but not in employment, education or training (so-called NEET group).

Each approach is described in more detail below and at the start of each we present a rationale to say why this particular approach is likely to be useful. We expected that the approximate figures obtained from these ten different approaches to collecting information would give up to ten, possibly very different, perspectives on information. Consistency in findings obtained from the different perspectives, or clear reasons for differences in findings, offered a way of triangulating information rather than relying on one source.

## **1. Main impairment of pupils with Record of Needs and/or IEP**

### **Rationale**

The rationale behind this approach to finding out who might benefit from materials in alternative formats is that these statistics include pupils who are known to have some form of a support plan in place, part of which may be an identified literacy element. Such pupils would include for example those with a visual impairment but will also feature pupils with specific learning difficulties including dyslexia and others.

All schools in Scotland provide statistical returns to the Scottish Executive for a specific week in September, a report on which is published in February of the following year. As with previous years the statistical bulletin (Scottish Executive, 2006) provides figures for the main impairment of all those with a Record of Needs or for whom an Individualised Educational Programme (IEP) has been prepared.

### **Findings**

In total, for 2005-6, over 34,000 pupils had a Record of Needs and/or IEP. The types of main impairment, numbers and percentages of the total number of pupils with Records or IEPs are shown in Table 3.1. The table is sorted from most prevalent to least prevalent cause of difficulty.

The table shows that in terms of school returns to the Scottish Executive, the percentage of main impairments ranged from returns for:

- those reported as deafblind or dual sensory impaired: 0.2% of 34,577<sup>12</sup>;
- through to those with specific learning difficulties including dyslexia at 20.9%;
- and those with Moderate Learning Difficulties at 21.3%.

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<sup>12</sup> Note that the total figures, 34,577 differs slightly from the summary total reported in Statistical Bulletin of 34,680 pupils. Both figures feature in the above Statistical Bulletin, hence they are reported here.

## SECTION 3

Pupils with other low incidence impairments such as visual impairment and hearing impairment are represented at around 1.5% (503) and 1.8% (624) of the total, respectively.

Difficulty	Abbreviation	No. of pupils	%
Moderate	MLD	7374	21.33
Specific – in language and/or mathematics (including dyslexia)	SpLD	7231	20.91
Social, emotional and behavioural difficulties	SEB	4445	12.86
Autistic spectrum disorder	ASD	3484	10.08
Other	Ot	3001	8.68
Moderate learning difficulties & significant additional impairments or disorders	MLD+	1824	5.28
Significant language and speech disorder	SLI	1679	4.85
Significant physical or motor impairments	PhI	1298	3.75
Severe	SLD	1192	3.45
Severe learning difficulties & significant additional impairments or disorders	SLD+	1091	3.16
Significant hearing impairment	HI	624	1.80
Profound learning difficulties & significant additional impairments or disorders	PLD+	548	1.58
Significant visual impairment	VI	503	1.45
Profound	PLD	146	0.42
Dual sensory impairment	DB	72	0.21
Not known / Not disclosed	NK	65	0.19
<b>Total</b>		<b>34577</b>	<b>100</b>

Table 3.1 Pupil main impairment figures for those with a Record of Needs and/or IEP. Statistical Bulletin 2006.

### Interpreting the findings

These figures must be treated with caution. For example, if you compare figures from one year to the next, interesting changes become apparent. There appears to have been an explosion in autistic spectrum disorder (ASD) in the past few years. Over the same period, however, there was a reduction in returns for certain other impairments. Although one rise is not matched by a corresponding reduction, the changes in reporting are similar in scale.

A second reason for treating the school census returns on main impairment with caution can be seen with a little more digging into the figures. An example will help illustrate this point using information on returns for those whose main difficulty in learning is severe visual impairment, as summarised in Table 3.2 below.

Source	Authority	Total with Record of Need and/or IEP	Hearing impairment as Main difficulty of learning	Visual impairment as Main difficulty of learning
Primary Schools (Table 7.5)	Edinburgh, City	662	8	5
	E. Lothian	164	0	0
	Midlothian	257	0	0
	W. Lothian	688	6	0
Secondary Schools (Table 6.8)	Edinburgh, City	949	19	9
	E. Lothian	97	0	0
	Midlothian	177	0	0
	W. Lothian	415	7	0
Special Schools (Table 8.5)	Edinburgh, City	732	0	0
	E. Lothian	0	0	0
	Midlothian	107	0	0
	W. Lothian	230	0	0
<b>Totals</b>		<b>4478</b>	<b>40</b>	<b>14</b>

Table 3.2 Returns for main impairment by Record of Need and/or IEP for four authorities

Table 3.2 shows returns for main impairment by Record of Need and/or IEP for four authorities – Edinburgh, East, Mid and West Lothian. Pupil numbers for primary, secondary and special schools are shown together with the source for these figures.

Consider first City of Edinburgh. The authority reports 2,343 pupils with a Record of Needs and/or IEP (in primary, secondary and special schools). With a pupil roll of 46,353<sup>13</sup> pupils attending publicly funded schools in Edinburgh City, this results in just over 5% of pupils having a Record of Needs or IEP. If we add in returns for E. Lothian, Midlothian and W. Lothian to that for City of Edinburgh we find a total of 4,478 pupils with a Record of Needs and/or IEP, or 4.5% of school population. Individual local authority figures are in line with the total figures for all pupils with a Record of Needs and/or IEP as a percentage of all pupils across Scotland (4.9%).<sup>14</sup>

This percentage, comparing all pupils with Records and/or IEPs in a single authority with all pupils across Scotland, might be internally consistent; it is however unlikely to be an accurate representation as can be seen when we consider returns for individual impairments for sample authorities. The third and fourth columns of Table 3.2 shows returns for the same four authorities this time providing information only on numbers of pupils with severe hearing impairment and severe visual impairment as main difficulty in learning.

Forty pupils are reported as having severe hearing impairment and fourteen reported with severe visual impairment across the same four authorities. As we will see later, we would expect that Edinburgh plus the three other authorities combined would have many more than 14 pupils with significant visual impairment

<sup>13</sup> Statistical Bulletin Table 5.2.

<sup>14</sup> Based on 34,680 pupils with Record or IEP as a percentage of 711,836 pupils in Scotland.

## SECTION 3

and more than 40 with significant hearing impairment. This highlights the fact that the statistical bulletin records the main difficulty in learning, and that many pupils have more than one difficulty. For example, 503 pupils were reported to have visual impairment and RNIB estimate that there are 1,100 pupils with sight loss in Scotland – the other 55% of the 1,100 pupils are likely to be reported as having a physical, learning or other impairment as their main difficulty in learning.

Although there remain doubts about the accuracy of returns for pupils with Records and/or IEPs the figures are still helpful in giving some idea of the numbers of pupils with different sorts of impairments as a main difficulty in learning. This becomes clearer from Table 3.3, which shows the relative prevalence of impairments per 1,000 pupils.

	Female	Male	Total	Rate per, 1,000 pupils		
				Female	Male	Total
<b>Total</b>	<b>10,445</b>	<b>24,132</b>	<b>34,577</b>	<b>29.8</b>	<b>66.6</b>	<b>48.5</b>
Significant hearing impairment	261	363	624	0.7	1.0	0.9
Significant visual impairment	218	286	504	0.6	0.8	0.7
Significant physical or motor impairments	506	792	1,298	1.4	2.2	1.8
Significant language and speech disorder	428	1,251	1,679	1.2	3.5	2.4
Autistic spectrum disorder	486	2,998	3,484	1.4	8.3	4.9
Social, emotional and behavioural difficulties	803	3,642	4,445	2.3	10.0	6.2
Learning difficulties:						
Moderate	2,728	4,649	7,377	7.8	12.8	10.3
Severe	462	729	1,191	1.3	2.0	1.7
Profound	68	78	146	0.2	0.2	0.2
Specific - in language and/or mathematics (including dyslexia)	2,135	5,097	7,232	6.1	14.1	10.1
Complex or multiple impairments:						
Dual sensory impairment	32	40	72	0.1	0.1	0.1
Moderate learning difficulties & significant additional impairments or disorders	627	1,197	1,824	1.8	3.3	2.6
Severe learning difficulties & significant additional impairments or disorders	412	679	1,091	1.2	1.9	1.5
Profound learning difficulties & significant additional impairments or disorders	253	295	548	0.7	0.8	0.8
Other	1,008	1,993	3,001	2.9	5.5	4.2
Not known / Not disclosed	18	43	61	0.1	0.1	0.1

Table 3.3 Relative prevalence of impairments per 1,000 pupils [Source: Scottish Executive Statistical Bulletin Education Series Edn/B1/2006/1 Feb 2006.]

There are many possible reasons why the number of Records of Needs and/or IEPs may not be an accurate measure of impairments and an analysis of these reasons is beyond the scope of this report (though see for example Thomson et

al, 1987). Indeed the inherent inaccuracy in reporting figures for Records of Needs is one of the factors that led to a change in the legislative framework to one that considers additional support needs.

## **Summary of findings on main impairment of pupils with Record of Needs and/or IEP**

Later we will return to discuss these figures in more detail but for now it is helpful to note that 2006 Statistical Bulletin returns indicate as main difficulty in learning of pupils with a Record of Needs and/or IEP the following examples:

- 7,377 pupils with moderate learning difficulties, representing a rate of 10.3 per 1,000 pupils;
- 7,232 pupils with specific learning difficulties in language and/or maths including dyslexia, representing a rate of 10.1 per 1,000 pupils;
- 1,298 pupils with significant physical or motor impairments, representing a rate of around 1.8 per 1,000 pupils;
- 503 pupils with a significant visual impairment, a rate of around 0.7 per 1,000 pupils;
- for every pupil who is visually impaired there are 2.5 times as many with significant physical impairment; 14.3 times as many with specific learning difficulties; and 14.7 as many with moderate learning difficulties.

As noted however the individual figures reported for each impairment as main difficulty in learning should be treated with caution given that many pupils have more than one difficulty in learning.

## **2. Estimating pupils' additional support needs**

### **Rationale**

Additional support needs are defined more broadly than special educational needs through the Education (Additional Support for Learning) (Scotland) Act 2004 (HMIE, 2006).

Main impairment data referred to above in (1) is based on information on main impairment and data on Record of Needs associated with previous legislation under the Education (Scotland) Act 1980, which was based on pupils' special educational needs. The ASL Act aims to ensure that all children and young people are provided with the necessary support to help them work towards achieving their full potential. It is legitimate therefore to ask what is the nature and extent of pupils' additional support needs. If ASN are not the same as impairments, then what are they?

The first set of annual education statistics featuring proxy measures for additional support needs appeared in the Scottish Executive 2007 Statistical Bulletin. It is too early to say how well they will aid understanding of literacy as a support need. Meanwhile the 2006 information gives pointers to literacy support needs.

### **Findings**

With this new concept of ASN in mind, we can revisit the 34,680 pupils with a Record of Needs or IEP. Statistics reported on their main impairment are not all

that helpful in identifying what kind of support they require in order to meet the additional needs arising from their impairments. Impairments are not the same as support needs. A pupil can have similar support needs arising from different impairments (or from other factors) and the same impairment can give rise to different support needs.

For example two children whose main impairment is noted as deafblindness may have entirely different support needs. One may use British Sign Language as a first language, have later become visually impaired and learned Braille; the other may use spoken English as a first language, use large print and benefit from text to speech software on a computer.

Two pupils with very different main impairments may require very similar, or indeed very different provision, to address their support needs. A pupil with a physical impairment may require specialised software to turn pages or to navigate the text of documents. But in order to read and access the curriculum he or she may require software that converts the text into speech. He or she may also require specialised switch operated software to demonstrate knowledge and understanding. A second pupil with a specific learning difficulty, for example dyslexia, may not need specialised software to turn pages but use the same text to speech software in order to read the text and access the curriculum. This second pupil may also require supportive writing software, though not using switches.

### **Summary of sample additional support needs**

In subsequent sections we will consider the nature of these support needs more fully, at least as they relate to accessing the curriculum and demonstrating knowledge and understanding. At this stage though it is helpful to give some idea of what might be considered as support needs.

A pupil might require for example one or more forms of support, such as in:

- moving and assisting
- reading text
- seeing text
- understanding text
- finding text
- holding books
- turning pages
- recording work e.g. handwriting
- etc.

The list is not intended to be exhaustive but to indicate the sorts of difficulties pupils might have with accessing the curriculum and demonstrating knowledge and understanding, with respect to text. We will return to discuss additional support needs under Section 4.

### 3. Pupils requesting Assessment Arrangements in SQA examinations

#### Rationale

Students who have difficulty with reading or handling examination question papers, or writing or recording their answers, may use an 'Assessment Arrangement' when sitting an SQA external assessment (Standard Grade, Intermediate 1 and 2, Higher and Advanced Higher) (SQA, 2004). The type of arrangement requested is determined by the nature of the pupil's support needs and the assessment in question, and may include, for example: extra time; use of human reader or scribe; a modified or adapted paper (large print, on coloured paper, a different font, Braille, or digital papers); transcription of the paper; paper signed to the candidate; use of a word processor or ICT.

Information on the assessments and examinations accessed by pupils, and any accommodations or arrangements used, will therefore provide a good indication of the number of candidates who have difficulty using standard printed materials.

When schools apply to use assessment arrangements they specify the pupil's impairment(s). SQA provided us with figures for the number of pupils with a particular condition, the examinations taken, and the type of arrangement used.

#### Findings

Since 1995 there has been a 340% increase in the number of candidates requesting Assessment Arrangements for SQA external assessments, from 3,094 students in 1995, to 10,650 in 2006 (SQA 2006). Approximately 7% of all candidates sitting examinations use Assessment Arrangements (Table 3.4).

#### Number of candidates requesting assessment arrangements

Year	Number of candidates requesting AA	Total number of candidates (entries for Access 3 through to Adv. Higher)	% of candidates who requested AA	Number of AA requests	Total number of entries	Requests as % of entries
2003**	8,350	139,457	5.99%	39,183	734,273	5.34%
2004**	9,904	140,012	7.07%	45,680	728,129	6.27%
2005**	9,814	142,158	6.90%	41,454	716,222	5.79%
2006	10,650	147,429	7.22%	43,291	732,794	5.91%

Table 3.4: Number of candidates and requests for Assessment Arrangements, 2004 – 2006

\*\* Figures based on requests rather than uptake

#### Factors leading to the requests for assessment arrangements

Table 3.5 and Figure 3.1 summarise the main difficulties that lead to requests for Assessment Arrangements and the number of entries made by the candidates. (The total number of candidates in Table 3.5 differs from the totals in Table 3.4 because candidates may have different support needs that relate to different

subjects.) The majority of candidates (between 64% – 68%) have Specific Learning Difficulties (SQA, 2003, 2004, 2005).

Difficulty	2003		2004		2005		2006	
	Candidates	Entries	Candidates	Entries	Candidates	Entries	Candidates	Requests
Specific Learning Difficulties	5,742	27,532	6,660	31,545	6,625	28,419	6,965	29,002
Various other difficulties (including temporary difficulties)	2,506	11,116	3,238	13,563	2,531	10,122	3,393	12,932
Visual difficulties	102	535	473	2,084	713	2,913	302	1,357
<b>Total</b>	<b>8,350</b>	<b>39,183</b>	<b>10,371</b>	<b>47,192</b>	<b>9,869</b>	<b>41,454</b>	<b>10,660</b>	<b>43,291</b>

Table 3.5: Numbers of candidates for whom Assessment Arrangements were made.

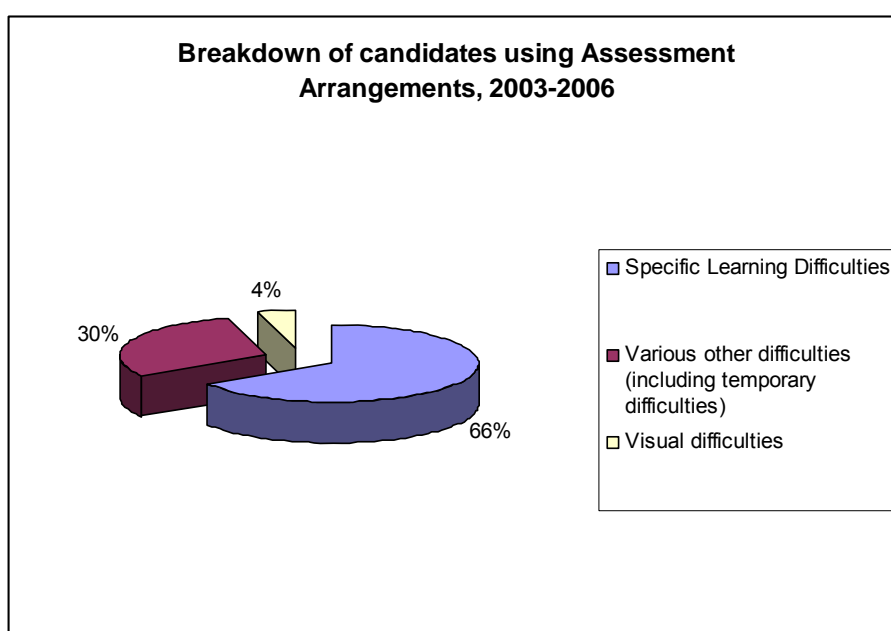


Figure 3.1: Difficulties underlying requests for Assessment Arrangements

Comparing the results shown in Figure 3.1 and Table 3.1 (main impairment) with SQA returns, a number of points emerge. Over two-thirds of requests for alternative assessment arrangements submitted to SQA are on behalf of pupils with specific learning difficulties including dyslexia. Children with moderate learning difficulties are not specifically presented in Table 3.5 or Figure 3.1 because the numbers of such pupils requiring Assessment Arrangements is relatively small, even though this group are the largest identifiable group in the Scottish Executive statistical returns. Some might argue that pupils with MLD don't require books because of their difficulty understanding text, but later sections of the report will show that this is not true: pupils with MLD can access books written in simple language, or with support from symbols.

Table 3.6 offers a further breakdown into more precise categories of impairment or difficulty for 2006. Note that the totals here are slightly different to those given above because the latter records the number of actual arrangements made, which are usually greater than the number of requests submitted to SQA by schools.

Table 3.6 demonstrates again that by far the largest group of pupils who have difficulty with reading SQA question papers and writing or recording answers are those with specific learning difficulties (66%). The next largest group are those pupils with general learning difficulties (8%) followed by 'other disability' at 4% and physical disability at just under 4%. The other disability groups represent relatively small percentages of the total number of pupils who require assessment arrangements.

	Candidates	Percentage of total no of candidates using AA	Requests
Specific Learning Difficulties/Dyslexia	5,601	52.71%	23,636
General Learning Difficulties	878	8.26%	2,924
Specific Learning Difficulties/Other	872	8.21%	3,181
Specific Learning Difficulties/Dyspraxia	522	4.91%	2,185
Other Disability/Difficulty	429	4.04%	1,530
Physical Disability	412	3.88%	1,602
Other Health Problems	358	3.37%	1,557
Autistic Difficulties	317	2.98%	1,401
Visual Impairment	302	2.84%	1,357
Social, Emotional and Behavioural Difficulties (EBD)	270	2.54%	984
Hearing Impairment	206	1.94%	721
Attention Deficit Hyperactivity Disorder (ADHD)	188	1.77%	870
Speech and Language Impairments	174	1.64%	720
Mental health problems	78	0.73%	215
Epilepsy	60	0.56%	277
Myalgic Encephalomyelitis	36	0.34%	126
Other	2	0.02%	4
EAL	1	0.01%	1

Table 3.6: Difficulties of candidates requesting Assessment Arrangements in 2006

### Analysis by level of assessment

Figure 3.1 shows that the proportion of candidates for whom Assessment Arrangements are requested falls as the level of the examinations increases: a greater percentage of candidates request Assessment Arrangements at Intermediate 1 (around 9%) and Standard (6%) than at Higher and Advanced Higher.

There are two possible reasons why requests decrease with difficulty of exam: candidates with difficulties may be less able to attempt higher level awards; and/or less able to demonstrate their attainment at higher levels. Either way the question must be posed: are there ways that pupils may be supported to achieve at higher level exams?

A greater percentage of candidates working at lower levels therefore require support to read and answer assessments, and so it is likely that the overall

percentage of pupils who have difficulties and who are taking Access courses, rather than externally examined courses, is larger.

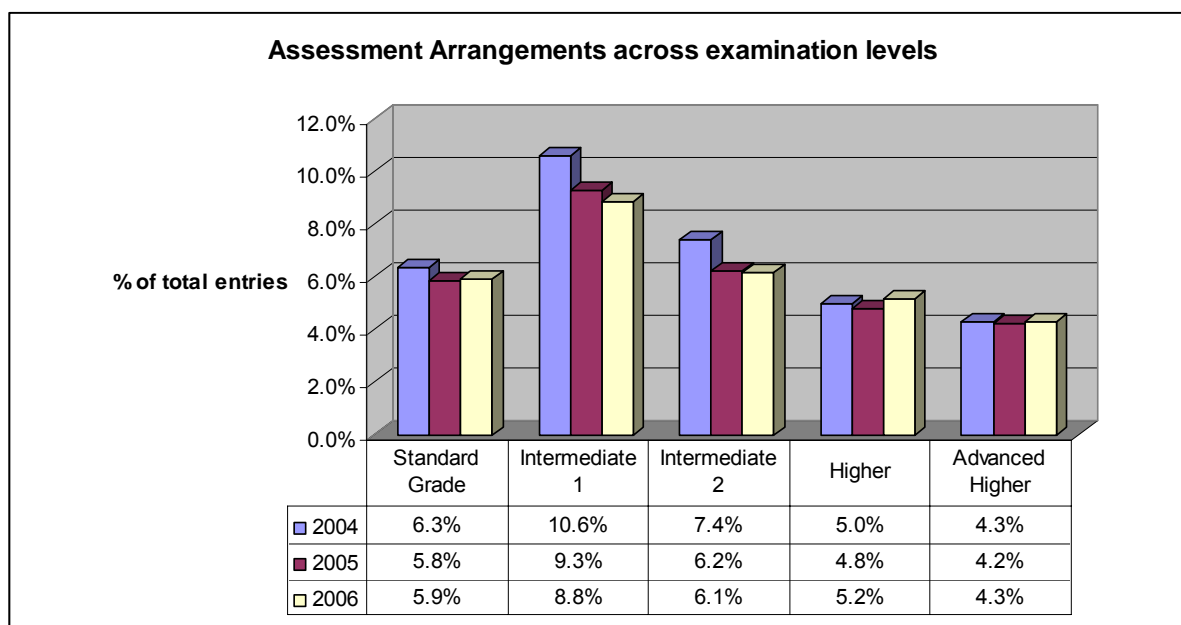


Figure 3.2 Assessment arrangements requests by level of examination, showing decrease with difficulty of exams.

### Pupils with English as a second language

Pupils with English as a second language are not covered by disability legislation (unless of course they have a disability) but they may well be considered to have additional support needs. SQA will allow such pupils to use an English/Native Language dictionary, and in most cases, extra time also. The numbers of pupils who have used these accommodations are shown in Table 3.7 (SQA 2006).

	2003	2004	2005
Number of candidates	802	938	1,002

Table 3.7: Candidates with English as a second language

Note that the number of candidates in this category is larger than any of the impairment groups who requested assessment arrangements with the exception of specific learning difficulties.

### Interpreting the findings

The SQA data provides one indication of the number of pupils who have reading and writing or recording difficulties. But it does not represent the total number of students who have reading and writing difficulties and who might benefit from learning materials in alternative formats, because not all students sit SQA external examinations. It is likely that a larger percentage of those who do not sit Standard Grade examinations will have reading and writing difficulties compared to those who do sit the examinations.

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## 4. National Assessment Bank (NABs) Assessments

### Rationale

Assessment of attainment for SQA National Courses usually consists of three subject-related National Units which are internally assessed by the school or college, plus an external assessment (e.g. the Standard Grade examination). Internal assessments are conducted using National Assessment Bank (NABs) 'Instruments of Assessment'. NABs feature in Standard Grade, Intermediate, Higher and Advanced Higher examinations. Each subject is associated with three NAB tests.

### Findings

To give an indication of scale there are around 5,000 subjects presenting at Intermediate 1, 2 or Higher level. As there is some overlap between subject papers not as many as 15,000 NABs are required but the scale of NAB requirements is potentially several thousand.

SQA can supply NABs in alternative format and so we asked for a breakdown of the requests received in recent years. SQA staff reported that:

"We seldom get requests for adapted format materials. Over the past three diets we have only had a dozen. They range from Braille copies to changing the font size of the materials.

- We have had three requests for Braille 1 versions.
- Four requests for TNR [Times New Roman] font size 14.
- And half a dozen requests for specific changes such as removal of italics, unboldening and enlarging diagrams."

### Interpreting the findings

The true figure for pupils undertaking NABs and who require assessment arrangements is therefore difficult to ascertain: schools are responsible for making assessment arrangements for NABs and data on arrangements made is not available.

An obvious question arises: if a pupil requires NABs at a certain level in order to sit an external exam, how many are prevented from obtaining qualifications because a) NABs are not requested in alternative formats and b) the infrastructure is not in place so that pupils who might benefit from NABs in alternative formats can do so.

As we will find, this is a potential mark of unmet needs and is a recurring theme. We will return to this point in Section 8.

## 5. Sample local authorities

### Rationale

Up to this point we have mostly reported on data that is relatively straightforward to obtain. Figures reported on main impairments, associated additional support needs derived from impairments figures and examination assessment arrangements are all straightforward to trace (less so NABs), even though they have not to our knowledge been combined in this way before.

The first and third deal mostly with known support need – that is pupils who have some form of support plan in place. What about other pupils: is there evidence that pupils other than those with recognised impairments have difficulties with literacy? Specifically, is there any evidence that there are pupils who do not have a Record of Needs or an IEP but who do have difficulty in either accessing the curriculum or in demonstrating their knowledge and understanding? Rather than measuring met or known support needs, it is important to establish some indication of unmet or unknown support needs and to bring these to the surface.

### Findings

Local authorities record pupil attainment levels and report to the Scottish Executive on an annual basis. The findings from one sample authority are shown in Table 3.8, indicating that the percentages of pupils who achieved Level D in three main subject areas on entry to S1 were as follows:

% of pupils attaining Level D at end of primary 7 in one sample local authority	
Reading	77.5%
Writing	62.6%
Maths	73.1%

Table 3.8 Percentage of pupils achieving Level D on entry to S1 for one authority.

Table 3.8 indicates that around one quarter of pupils do not attain the expected Level D in reading, writing or maths at the end of primary school on entry into S1. Comparing the numbers with those who have a recognised main impairment and a Record of Needs and/or IEP it is clear that a far larger number of pupils have some difficulty with literacy but do not have a formal support plan.

It is worthwhile noting that figures for Scottish local authorities are somewhat similar to findings in England published by the Department for Education and Skills (DfES). In their 2005 Statistical First Release on SEN they note:

“70% of children left primary school with Level 4 reading or above in English – this means that about 180,000 children started secondary school without the ability in English that ministers believe is critical to their success at GCSE.” Interactive, issue 66 October/November 2006. [DfES, 2005]

### **Interpreting the findings**

It is important to be aware that there are problems in using such returns to inform how many pupils will benefit from alternative formats for materials. Some of the factors to consider include:

- At which point should we set a level below which pupils are considered likely to benefit – if at all – from offering text in alternative formats?
- It is one thing to know that there are a larger number of pupils experiencing difficulties in accessing the curriculum, and/or demonstrating knowledge and understanding than those who have support plans in place. It is quite another to say that any or all of them will benefit from materials in alternative formats.

## **6. Sample secondary schools: S1 pupils who have difficulty accessing print or writing and recording**

### **Rationale**

Obtaining national figures on main difficulties in learning, interpolating support needs and finding out local authority figures as a whole represent different ways of finding out how many pupils may benefit from some sort of support to access the curriculum or demonstrate knowledge and understanding. It is also helpful to obtain information on individual schools. Data from individual schools can help to provide a more detailed breakdown on particular profiles of needs.

### **Findings**

#### **Secondary mainstream school**

In one secondary school both spelling and reading tests are carried out with pupils entering S1. Results are collated and marked, then compared against the pupil's chronological age as well as against other information forwarded by the primary school. The school follows up pupils with a 2-year discrepancy i.e. reading level 2 years below the pupil's chronological reading age. The school expects that S1 to S2 children will achieve Level D or above, so are looking to identify children who are at Level B or below.

In this secondary school, which draws from a mixed rural and urban area, 28 pupils were found to have some form of literacy or numeracy difficulty (the latter measured by maths diagnostic testing). With a school entry year group of 180 children, this represents around 15.5%. This figure did not include those pupils who were identified as having a specific learning difficulty or dyslexia, which resulted in an additional 10 pupils. As seen in Table 3.9, out of 180 pupils entering S1, 38 therefore had significant difficulties with literacy, a figure of 21.1%

In this particular year (2006-7) the sample school reported more children working at Level B than ever before, that is pupils who cannot follow the standard curriculum. (The 15.5% figure included those working at Level A.)

Sample Secondary School	Numbers	%	Identified ASN?
S1 Year Group entry	180		
Screened at Level B (2 SD discrepancy)	28	15.6	No
Specific Learning Diff or other	10	5.6	Yes
<b>Total Single School S1</b>	<b>38</b>	<b>21.1%</b>	<b>Mix</b>

Table 3.9 Sample secondary school S1 entry literacy figures

### Special school, urban area

One special school reported a school roll of 63 pupils aged 5-18 years. Of these pupils all experienced significant difficulty in reading and understanding text. This affected all areas of school work and the pupils had similar difficulty in recording work.

### Interpreting the findings

When assigning literacy levels for S1 entrants much will rest on the particular definition of functional literacy one chooses to adopt. For example if one were to set functional literacy at a 9-year-old level and apply it to S1, then problems in literacy would all but disappear as almost all pupils entering S1 would achieve Level B. Doing so allows certain statements to be made on attainment of literacy levels. Setting the S1 literacy entry level higher may result in a much greater number of pupils appearing not to achieve functional literacy – even though the same proportion of pupils may achieve that particular level of literacy e.g. Level B. Because the cut-off point is arbitrary a larger (or smaller) number could appear to be being identified as not achieving functional literacy.

The figures for one average mainstream secondary school demonstrate that there is little point in lowering the benchmark for functional literacy if that level does not allow pupils to follow the standard curriculum.

### Summary of findings on sample secondary schools

When deciding on a number or percentage of pupils who require support to access the curriculum or to demonstrate knowledge and understanding, in which confidence can be placed, we also recognise that a wider number may also benefit.

In terms of policy development and service delivery, planning should consider ways in which developments that meet the needs of one group (e.g. those with a support plan in place) may also benefit others (e.g. the far greater number of those who do not have a support plan but who do have significant difficulties in literacy).

At the very least the model of service delivery should not prevent the second larger group benefiting. At best a single process could address both the group for whom a support plan is in place, and the larger group of those with unmet literacy support needs, perhaps through the curriculum in a regular fashion.

We discuss models of service delivery in Sections 13 and 14 of this report, but a core principle is the view that getting the model correct should allow the 'business to grow' to meet the demands of a wider group, rather than require radical

restructuring and relocation to meet those with as yet unmet, and to some extent, currently disregarded needs.

## **7. Questionnaire returns on number of pupils who experience difficulties in accessing literacy**

### **Rationale**

We compiled both a short form and long form of questionnaires (Appendices 2 and 3) in which we invited people to provide information on:

- role of respondent e.g. class teacher, and setting worked in primary class;
- numbers of pupils the individual worked with and whether completed on behalf of a school, authority, class or pupil group;
- pupils' reported difficulties e.g. reading text;
- what kind of support pupils were given e.g. reader, scribe etc.;
- how much time was spent creating accessible materials;
- how many materials were created and which types;
- what developments are desired in regard to curriculum materials in alternative formats.

### **Short questionnaire**

Because of limited time available to undertake the first phase of the project (September to December 2006) the short questionnaires could only ever provide indicative clues and form part of a broad approach to finding out how many pupils required support in literacy including materials in alternative formats. In order to generate statistically reliable returns, we would have required clear methods and routes for disseminating questionnaires to ensure that individual classes or schools, and service providers at a local authority level, were not counted more than once. Detailed permission would have had to be sought, meetings held and presentations made to authorities or clusters of authorities. All of this would have eaten into time available to carry out the project.

We therefore used the short questionnaires in an opportunistic fashion, presenting them to individual delegates at three different conferences and via the CALL web site – ensuring that the same people did not return questionnaires twice.

### **Long questionnaires**

The long questionnaires were also not designed to produce statistically reliable or valid results. The time available to carry out the investigation, obtain permissions, send out pilot questionnaires and ensure full data integrity and carry out statistical analysis precluded the use of questionnaires as anything more than giving overall impressions. Nevertheless, both short and long questionnaires generated useful insights and in Sections 5 and 6 we discuss in some detail the results obtained from responses to the questionnaires.

## Findings

### Short questionnaires

In this section we report only the numbers of pupils who were described as experiencing difficulty in accessing the curriculum or in demonstrating knowledge and understanding. In later sections we return to discuss other findings from returns.

Forty-four questionnaires were returned. Respondents were mostly learning support teachers but included four class / subject teachers, two teachers of visually impaired pupils and two pupils who reported on their own school. A breakdown is given in Table 3.10.

Role	No. of Respondents	No. Pupils with difficulties
Learning support teacher	0	0
	2	1-5
	3	5-10
	5	10-20
	17	>20
	<b>Total 27</b>	<b>&gt; 400<sup>15</sup></b>
Class / subject teacher	3	1-5
	2	5-10
	<b>Total 5</b>	<b>20</b>
Teacher of VI pupils	1	10-20
	1	>20
	<b>Total 2</b>	<b>&gt;30</b>
Pupil	1	5-10
	1	>20
	<b>Total 2</b>	<b>&gt;20</b>
EAL teacher	1	>20
Head Teacher	1	>20
Other	1	1-5
	1	5-10
	2	10-20
	1	>20
Not noted	1	10-20

Table 3.10 Number of respondents to short questionnaire together with number of pupils worked with.

From this small sample of respondents we can see that, of the small number of respondents, the majority (27 out of 44) were learning support teachers working

<sup>15</sup> Because the figures are not in any way statistically reliable the totals for each type of respondent represent a mix of most common reported for that type of respondent with an approximate weighting accorded to the number of respondents reporting number of pupils with difficulties e.g. the majority of learning support teachers (17) reported working with more than twenty pupils each.

with over 400 pupils with difficulties in reading, holding or manipulating books. The short questionnaire did not invite respondents to state the number of pupils in the school, class or authority with whom they worked, so it is not possible to derive percentages from these figures. Instead they give some indication of relative weighting.

### Long questionnaires

As mentioned above, time limitations did not allow for engagement with local authority senior managers to ensure detailed tracking of a fully representative range of respondents. Rather than comparing figures from questionnaires across all authority population figures and age structures therefore, we report below on returns for one authority.

In order to avoid biasing results elsewhere in the report we report only this authority's responses to the long questionnaire returns. We do not report on this authority as one of the four VI service authorities, nor does it feature in our reports on S1 literacy entry figures. In this way we provide results from across a representative spread of schools, services and authorities.

In this one authority questionnaires were returned on behalf of two primary and two secondary schools with pupil numbers shown in Table 3.11.

Numbers	Primary		Secondary	
	School 1	School 2	School 3	School 4
School roll	170	80	370	250
Reading difficulty	24	10 + 3 Romanian	45	30
Seeing difficulty	4			1
Understanding difficulty	7	11 + 3 Romanian	45	30
Difficulty holding or turning pages		1		
Writing or recording difficulty	Much higher	Much higher	45	30
Other		About 8		
<b>% with difficulty</b>	<b>14%</b>	<b>13%</b>	<b>12%</b>	<b>12%</b>

Table 3.11 Sample return from one local authority showing number and school percentages of pupils with difficulties in reading, seeing, understanding, holding or turning pages or writing and recording.

Respondents were asked to note how many pupils experienced difficulties with reading text, seeing text, understanding text, holding or turning pages, recording work or other. Table 3.11 shows difficulties across a range of different measures. As it was possible, in some case likely, that the same pupil had difficulty with more than one aspect of literacy, the overall percentage figure counts the pupil only once. For example, the percentage of pupils who have difficulty in School 2 is given as 13% - 11 out of 80 – and we have not included the three Romanian pupils. The percentages shown are calculated from whichever was the higher number of pupils with a difficulty in reading, seeing, understanding etc.. This probably underestimates the numbers who experience some form of difficulty (it was clear from notes provided by respondents that the numbers they reported referred to different pupils).

With this in mind the 12-14% is remarkably consistent and not dissimilar from other returns. What is clear is that the figure reported is substantially higher than the 5% who, according to official returns, have some form of support plan in place (discussed in the first part of Section 3).

### **Interpreting the findings**

It is striking that the percentage is similar across both primary and secondary sectors. Clearly the same children don't attend both sectors at the same time so it is not possible, from this information alone, to say that the children in the primary sector will continue to have literacy difficulties into secondary school, or whether the children with such difficulties in secondary would be a different group. The findings from (5) and (6) would suggest that children who have difficulties in secondary also had difficulties in primary.

## **8. Numbers with below average performance on 5-14 testing**

Referring to figures presented under (5) above, we see that over 20% of pupils do not achieve the level of attainment for their age on entry to secondary school. There is some indication that this may be improving slightly in that measures of reading, mathematical and scientific literacy of 15-year-olds in OECD countries shows that Scotland has narrowed its gap in reading literacy (see HMIE, 2006, para 8), though not by a statistically significant amount.

## **9. Pupil caseloads from sample service provider(s)**

### **Rationale**

We approached a small number of service providers to ascertain the nature of the impairments and additional support needs of pupils they worked with.

While we will go into more detail in later sections of the report it is helpful to note here that we approached:

- one visual impairment service that provides a service to four local authorities (representing approximately 15% of the Scottish school population);
- one service provider working with pupils with reading difficulties in one local authority (approximately 10% of the Scottish school population).

### **Findings**

#### **Visual Impairment Service**

The service supports approximately 200 children and young people with significant visual impairment. (In addition, just over 50 pupils with significant visual impairment attend independent or grant-aided special schools. The latter will receive support from outwith this VI service. Of the 50 who attend schools outwith the public sector more than half have complex additional support needs.) Of the 200 children, around 125 have additional, often complex impairments. The VI service has a staff of 3 full time teachers and 2 full time technicians. Approximately 30 pupils are served by the transcription service.

**Service for pupils with reading difficulties**

This service, separate from the VI service, supports around 45 dyslexic children in primary schools in the local authority. The service has two FTE staff working on a peripatetic basis and also creating accessible resources.

**10. Pupils leaving school not in employment, education or training (so-called NEET group)****Rationale**

The so-called NEET (Not in Employment Education or Training) group have been the subject of intensive discussion and reporting in recent years (see for example HMIE, 2006). Sub-groups include young carers, leavers; those with family disadvantage and poverty; those who are substance abusers, young offenders; pupils with additional support needs and educationally disaffected. Risk factors include deprivation and financial exclusion, low attainment, weak support networks and stigma of others (HMIE, 2006). Given that low attainment features strongly as one of the risk factors and that NEET is associated with educational disaffection it is reasonable to propose that difficulties with literacy features somewhere as cause or effect.

**Findings**

There could therefore be a broader range of learners who might potentially benefit from accessing the curriculum through alternative formats e.g. possibly a subset of the so-called NEET (not in employment, education or training) group.

While there continues to be debate around what percentage of NEET are at risk of low attainment, the figure of 13%-15% of young people in the 16-25 age group is often quoted (e.g. HMIE 2006). Reports by HMIE indicate that this figure is falling and there are already a number of strategies in place to further reduce this percentage.

