



**Independent Evaluation of the uses of Espresso
online digital resources in primary schools**

**Final Report - School Uses and Learning
Impacts**

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THE REPORT

In 2010, Espresso commissioned an academically-based and fully independent evaluation study to explore outcomes of uses of its online resources in primary schools. The aims of the study were to explore how Espresso resources are used to support teaching and learning, to assess cost and associated benefits arising, and to explore whether levels or types of use in schools might be associated with measures of pupil achievement and school performance.

The evaluation that was undertaken drew on a range of different forms of evidence, analysed in ways to match the needs of the specific aims being explored. In order to make the full report of the study and its findings more easily accessible, and to enable the reader to focus on selected aspects of specific interest, the entire report has been divided into four sections.

- Section 1 Summary – this section contains two main elements, Report Headlines and an Executive Summary.
- Section 2 School Uses and Learning Impacts – this includes an introduction and background to the study, details of the structure of the study relating to school uses and learning impacts, descriptions of schools providing evidence, details of how Espresso resources are used in schools and learning outcomes related to these, the pedagogies that teachers adopt when using the resources, and key aspects of learning that are impacted by uses of Espresso resources.
- Section 3 Management, Time and Cost Benefits – this includes an introduction and background to the study, details of the structure of the study relating to management, time and cost benefits, details of benefits arising, and how these are calculated at school and wider levels.
- Section 4 Attainment and Usage Levels – this includes an introduction and background to the study, details of the structure of the study relating to attainment, performance and usage levels, the forms of data that were gathered and used for this element of the study, and the forms of analysis that were undertaken, together with a range of detailed statistical findings.

1. INTRODUCTION

Espresso online digital resources have been developed and made available to schools since 1998, when the National Grid for Learning (NGfL) initiative was launched by the government department for education. The company was able, through a £91,000 grant won in 1997 from the British National Space Centre, to set up its first online distribution trials. Since that time, Espresso resources have been created continuously, made accessible, and used widely by teachers and learners in primary and secondary schools. A distinctive interface associated with Espresso resources has been used since those early days, and the Espresso services for schools are maintained currently through dedicated teams who provide technical support and training, direct school contact, and training sessions (5,000 were run in 2009, which covered training for senior managers as well as for teachers). Espresso provides both support (training and helplines) and digital resources in the form of Espresso resources (currently to 9,867 primary schools), and in the form of Clipbank resources (currently to 680 secondary schools).

Subscription to Espresso is based largely on pupil numbers in a school. In early 2011, a 2-year subscription would cost a school £5 per pupil on average, plus 75p per pupil on average for pupil home access, and £75 per school for access to Content Club. A subscription includes teacher home access, as well as an annual training session for each school (which is a popular feature with schools).

Resources are offered to schools in a number of forms, and are organised for teachers and learners in areas associated with specific Key Stages, subjects, and topics. Resources are provided in text, image and video formats. News items are provided weekly, both in ‘News Bite’ form, as well as in formats that are longer and include more detail (see Figure 1). Text-based news articles are produced in three different formats – in original newspaper format, in an Espresso format, and in a summary format (the three formats being differentiated according to language and literacy levels). Video clips are a key feature of the resources; they can now be played in different ways – using coupled video and audio, or in audio form only, or in video form only.

Figure 1: News items are provided in different formats to suit different learning needs



Espresso resources are characterised by certain features that set them apart from other sets of online resources. The interface for teachers and pupils is clear, colourful, and uncluttered. A number of recognisable characters appear with the resources, but the resources are largely teacher-based, rather than providing standalone learner-based activities (which is the focus of other online resource sets). Espresso resources are rich not just in visual terms, but also in auditory terms, and in terms of use of short video clips. The material provided is as ‘real’ as possible (rather than being largely cartoon-based), and is kept ‘up-to-date’. By comparison, other online resource sets are less video-based, or provide less ‘real’ material, or offer test exercises rather than focal topics aimed at raising awareness to ideas and knowledge, and at stimulating discussion. The distinctiveness of Espresso resources means that they can be considered by teachers and learners to be complementary to other sets of resources. For example, TES Connect resources are largely created by teachers and while they can be downloaded they exist in a wide variety of formats (TES Connect, 2011), Education City resources are concerned more with learner activity and many are highly cartoon-based (Education City, 2010), and Sam Learning resources provide test banks, albeit in different formats, using drag and drop and box completion exercises, for example (SAM Learning, n.d.).

Espresso online digital resource evaluation

Espresso resources are popular with schools, and many schools subscribe to these resource banks, either individually, or through local authorities (LAs) or regional broadband consortia (RBCs). The resource banks are held on server systems, and Espresso accommodates access through a range of different server facilities. In September 2010, a total of 8,978 primary schools subscribed to the resources. The numbers of schools that gained access through particular server systems is shown in Table 1.

Table 1: Numbers of schools gaining access through different server systems

Server system	Numbers of schools gaining access
Linux boxes	3,491
Cachepilot equipment	3,462
Atomwide servers	409
CLEO servers	748
Old Linux boxes	439
Other servers	429
Total	8,978

2. BACKGROUND

Although Espresso resources are very widely used, there have been very few studies that have looked at their specific uses and outcomes. The author of this report has undertaken two prior studies. The first (Passey, 2005) looked at the implementation of Espresso resources into schools through training providers across one region of England. The second (Passey, 2005b) looked at resource uses in a range of primary schools in the North-West of England. Findings from the second study were used within a subsequent academic analysis, which was reported and published in an academic journal (Passey, 2006). This analysis looked at impacts of resources in terms of specific elements of learning (these are summarised in Table 2).

Table 2: Learning aspects supported by Espresso resources from a random sample of classroom observations (Source: Passey, 2006)

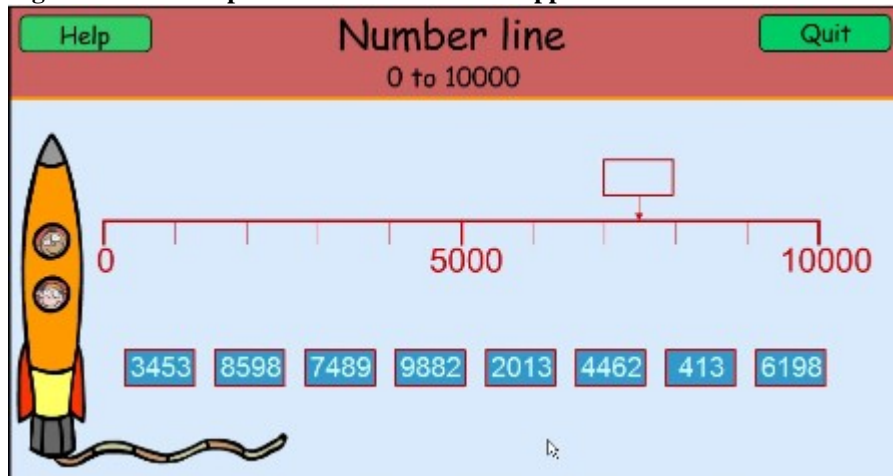
Learning Aspect		Frequency within classroom sessions observed (n=31)
Internalisation		31
Sensory stimulus	Visual	31
	Auditory	22
	Kinaesthetic	3
	Emotional	4
	Social	3
	Textual	5
	Musical	4
	Interpersonal	19
Internal cognitive processing		31
Subject knowledge (defined by DfES categories)	Searching	3
	Generating or developing ideas	17
	Hypothesising	0
	Imagining	3
	Gaining skills	6
	Gaining understanding	30
ICT knowledge	Skills	1
	Understanding	0
Knowledge handling (defined by Bloom categories)	Acquisition	31
	Comprehension	24
	Application	6
	Analysis	7
	Synthesis	3
	Evaluation	4
Concept formation		15
Reconstruction of ideas		10
Externalisation		31
Motor stimulus	Writing	11
	Reporting	0
	Speaking	15
	Presenting	0
	Drawing	0
	Completing	5
	Moving	3

The table indicates clearly those aspects of learning that were associated most frequently with uses of the Espresso resources observed in those 31 classroom sessions (shown in Table 2 coloured cream). The academic paper argued that impacts of online Espresso resources arose more strongly as they were used to support certain areas of learning. It argued also that national tests such as SATs and GCSEs would not necessarily gain directly from these impacts (as test or examination questions gain from elements that are concerned strongly with aspects of memorisation, or of review or reflection, often of text, rather than memorisation or review of concepts or of visual material). (An example of an

Espresso online digital resource evaluation

Espresso resource used to support revision is shown in Figure 2.) Recent research reports (Watkins, 2010 in Shepherd, 2010) have indicated that learner achievements are supported more effectively, however, by a wider focus on aspects concerned with deeper learning, rather than a more narrow focus on ‘teaching tests’.

Figure 2: An example of a resource used to support revision for tests



In the paper that focused on learning with Espresso resources (Passey, 2006), the author argued that impacts in the areas associated with learning arising from uses of Espresso resources needed identification much more specifically, as there were clear potential benefits for learning arising in the specific areas that had been explored in that study. The evaluation findings reported here will take that concern and argument further; the findings from this study will explore aspects of learning that are supported by uses of Espresso resources in classrooms, and will detail these within other areas of learning that go beyond the cognitive arena. Early indicators of the wide range of learning aspects that are supported when Espresso resources are used in classrooms is detailed in later chapters of this report (particularly in Chapter 6).

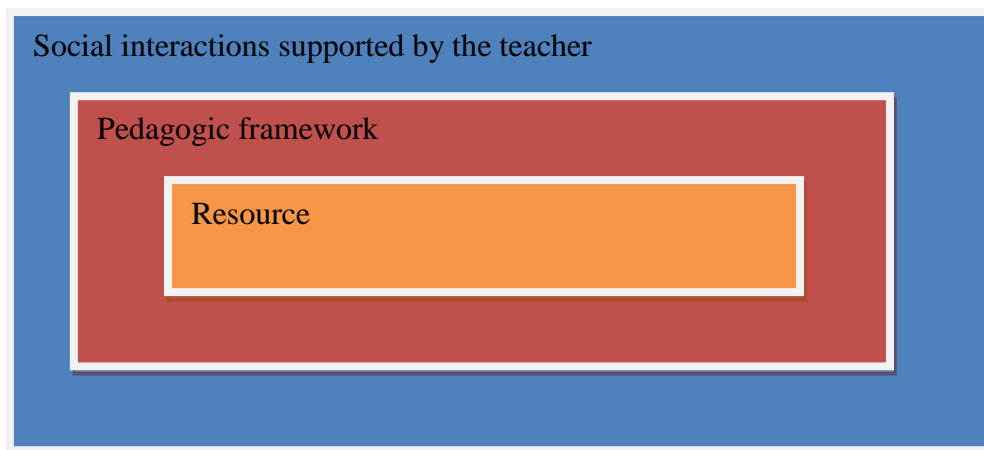
It should be noted, however, that impacts of resources are gained through a combination of factors - resource features that are built into the resources by the developers; and pedagogical features that are constructed around and for the resources by teachers. Resource features are constant, while pedagogical features are not. Some impacts, such as engagement through visual material, are brought about almost entirely through resource features (which are constant). Other features, such as opportunities to use resources to consider the development of different learning strategies, are brought about through pedagogical features strongly (which are not necessarily constant). If teachers are not aware of how to use resources to support particular pedagogical features, then of course they neither enable them in practice in classrooms with pupils, nor recognise them when they report about their practice. In the Chapters of this report where teachers report impacts (Chapters 6 and 7), and where an overview of impacts is shown (Chapter 8), the implications of this argument need to be considered carefully; levels of pedagogical knowledge about using online resources that teachers possess need to be considered in the context of the levels of outcomes reported. In Figure 37 on page 45, it is important to recognise that many of the reported impacts that are very commonly reported (on the left of the figure) rely on resource features, while those reported impacts that are commonly reported (on the right of the figure) rely more on pedagogical features. This concern mirrors those raised by Cox *et al.* (2003) in their overview of teacher uses of technologies.

3. THE INDEPENDENT EVALUATION STUDY

Espresso has commissioned this academically-based and fully independent evaluation study to explore outcomes of uses of its online resources in primary and secondary schools. For this evaluation, there are three complementary aspects to, or aims of, the study. In this section of the report, it is the first of those aims that are detailed: An exploration of how Espresso resources are used to support teaching and learning. This aspect has been built on methods and outcomes from the previous studies, but has also sought to identify learning benefits arising not only in cognitive terms (those indicated in Table 2 above), but also in megacognitive, metacognitive, motivational, social and societal areas of learning.

A key outcome from previous studies (Passey, 2005: 2005b) was the identification of the importance of appropriate teacher interventions and the framing of the resources within lessons, and with pupils, when Espresso resources were used in classrooms. In this study, the approach that has been taken is to consider three related and overlapping elements: the resources themselves (how they are used, and how they are integrated into classroom and school practice); the pedagogic frameworks that are used by teachers with these resources (what their pedagogic aims are, and where they believe value lies in terms of pedagogic use and learning outcomes); and forms of social interaction adopted by teachers (the ways that teachers interact with pupils when resources are used, and what social interactions can arise with resources used with pupils). These elements are represented below in Figure 3.

Figure 3: Resources and modelling pedagogic uses



4. THE STRUCTURE OF THE STUDY

4.1 Overall study design relating to aspects of teaching and learning

The study has been designed to provide Espresso with both summative and formative evaluation outcomes, allowing Espresso to further support teachers and schools in using digital online resources effectively. The core elements of the study that have gathered essential evaluation evidence relating to aspects of teaching and learning have been:

- A review of experiences of a selected group of practitioners (contacted by Espresso initially and agreeing to involvement with the evaluation). The completion of questionnaires or interviews with the practitioners was the responsibility of the evaluation team and was undertaken entirely independently of Espresso. This element gathered evidence from 45 schools, and findings are reported in Chapter 6 of this report.
- A wide collection of evidence from any teachers and schools wishing and willing to be involved. Access to a set of online questionnaires was managed by Espresso, giving links to information and the questionnaires themselves through their training sessions and their online website. The set of online questionnaires was proposed and agreed on the basis of findings from the initial questionnaires and interviews (they are shown in Chapter 7 of this report).

4.2 Schedule for the first component of the study

Evidence for this component was gathered from a range of head teachers and teachers, through semi-structured interview schedules, conducted by telephone and email. The interview schedule was designed to identify levels of use of the digital online resources, focus of uses, and benefits and outcomes identified. The interview schedule was initially constructed in draft, reviewed by personnel selected by Espresso (to ensure details matched experiences of Espresso personnel and trainers), and then agreed by the University Research Ethics Committee (UREC).

The final schedule is shown in Appendix A. When the schedule was finalised, a number of practitioners were approached by Espresso. Espresso asked practitioners if they were willing to talk to the evaluation team about their experiences, and to give feedback to indicate how digital online resources were being used to support teaching and learning. For those willing to be involved, Espresso provided contact details; the research team set up discussions, asked questions of the practitioners through a questionnaire or interview. In total, 45 responses were gained (43 through questionnaire completion, and 2 through telephone interviews).

4.3 Online survey schedules for the second component of the study

Evidence for this component was gathered from the widest possible range of head teachers and teachers using Espresso resources. The schedules for the second component of the study were created on the basis of findings from the first component of the study. The questions used in the online schedules can be seen in Appendices D and E of this report.

The surveys were introduced by information presented on two web pages, giving details about informed consent, and then giving access to the survey questions themselves (see Appendices B and C). The information sheets asked practitioners if they were willing to provide details about their experiences, to give feedback to indicate how digital online resources were being used to support teaching and learning. All survey responses were gathered in anonymous form, and no electronic link back to individuals was set up. The three online questionnaires were made accessible online, and teachers were made aware of these in Espresso training sessions. All teachers could then respond to these questionnaires within a given time period. Responses came to the evaluation team directly, so that anonymity was ensured. The responses allowed a potentially widely representative sample to be gained. The numbers of respondents was not limited for this part of the study.

5. SCHOOLS PROVIDING DETAILED QUESTIONNAIRE AND INTERVIEW RESPONSES

5.1 Introduction

From the initial element of the evaluation, 45 school responses were gathered. The findings are reported in two broad categories – the first (in Chapter 5) details the background of the schools involved, and the second (in Chapter 6) details findings about uses of Espresso resources.

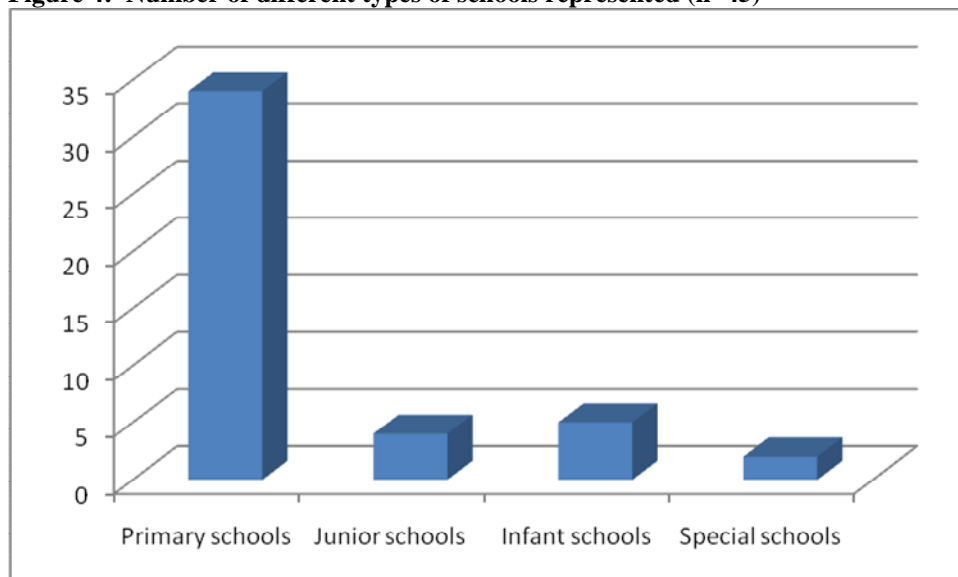
It should be noted in the sub-sections of this chapter, that where background details about the schools have been sourced from publicly available documents (such as those accessible from the DFE, Ofsted, or school websites), that these are reported as stated in the relevant sub-sections. However, in some instances, the data that are publicly reported is not always in the form required for this evaluation, or is not reported at all. Where there were no reports, then blanks were recorded in the evidence base, and these can be identified within the respective sub-sections below (where total numbers do not add up to 45, for example). In other places, where estimates are made (such as the levels of free school meals), this estimation approach is made clear within the respective sub-sections. It should also be noted that data was taken from the most recent source in every case, in order that a current picture was presented as far as was possible.

A range of details were gathered about the schools providing evidence for this evaluation. Some of these details allowed aspects of representativeness to be considered, while others allowed details about the width of schools involved to be assessed. These background details are reported in sub-sections that follow.

5.2 Types of school

Responses were gained from different types of schools (as described by the DFE) within the primary sector. Of the 45 schools, 34 were primary schools taking across the 5 to 11 year age range, 5 were infant schools taking across the 5 to 7 year age range, 4 were junior schools taking across the 7 to 11 year age range, 1 was a special school taking across the 7 to 19 year age range, and 1 was a special school taking across the 11 to 16 year age range (see Figure 4). It should be noted that, although the latter school did not take pupils from the primary sector, the school used Espresso resources to support its pupils. Of the 45 schools, 42 were state, 2 were service children's education schools, and 1 was an independent school.

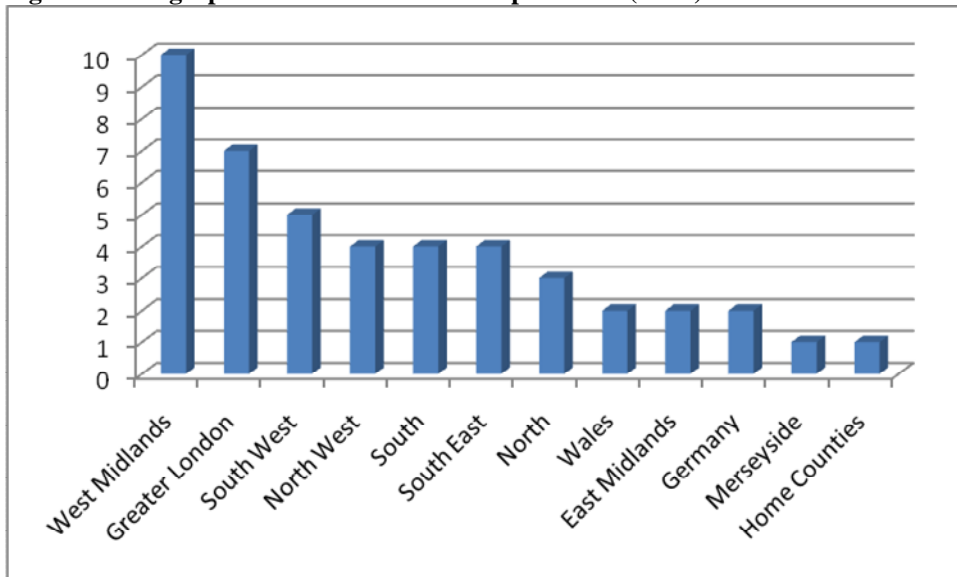
Figure 4: Number of different types of schools represented (n=45)



5.3 Geographical location

Schools in the sample were widely distributed geographically (using addresses from DFE and school websites). Of the 45, 10 were in the West Midlands, 7 were in the Greater London area, 5 were in the South West, 4 were in the North West, 4 were in the South, 4 were in the South East, 3 were in the North, 2 were in Wales, 2 were in the East Midlands, 2 were in Germany, 1 was in the Merseyside area, and 1 was in the Home Counties (see Figure 5).

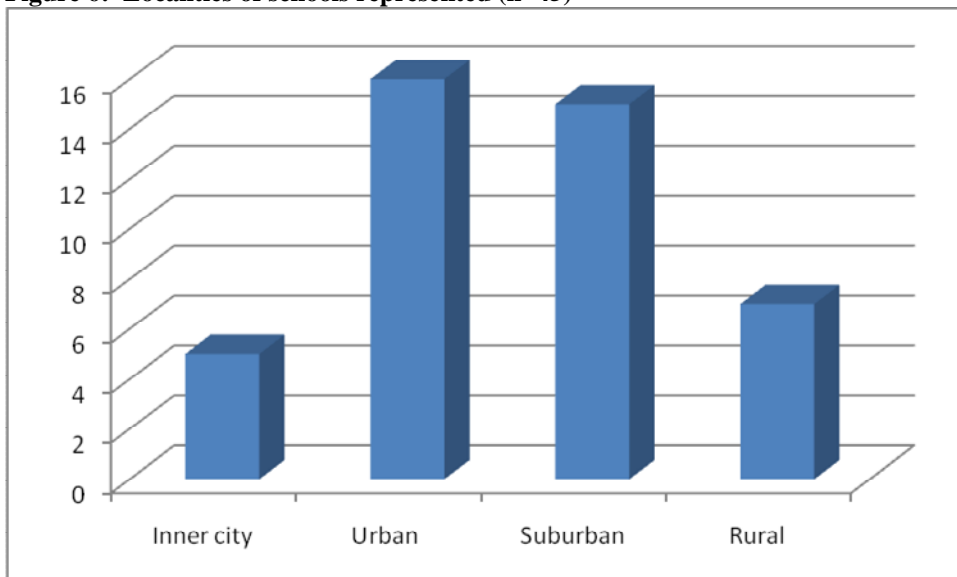
Figure 5: Geographic locations of schools represented (n=45)



5.4 Locality

The schools in the sample took pupils from different catchment areas and localities (categorised according to descriptions in latest Ofsted reports). Of the 45, 5 were located in inner city areas, 16 in urban areas, 15 in suburban areas, and 7 in rural areas (see Figure 6).

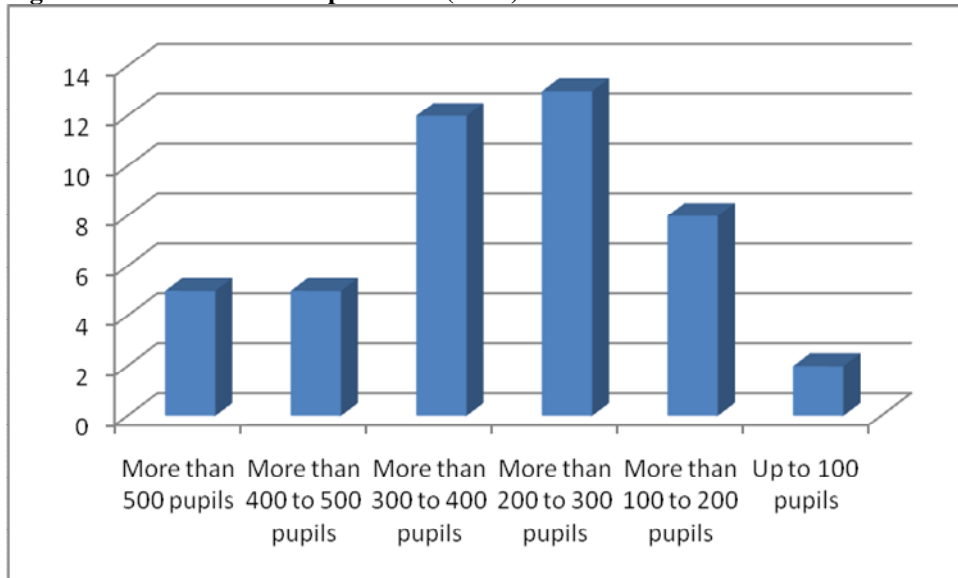
Figure 6: Localities of schools represented (n=45)



5.5 Number of pupils on roll

Schools in the sample covered schools of different sizes (reported in DFE, Ofsted and school websites sources). Of the 45 schools, 5 had more than 500 pupils on roll, 5 had more than 400 up to 500, 12 had more than 300 up to 400, 13 had more than 200 up to 300, 8 had more than 100 up to 200, and 2 had up to 100 pupils on roll (see Figure 7).

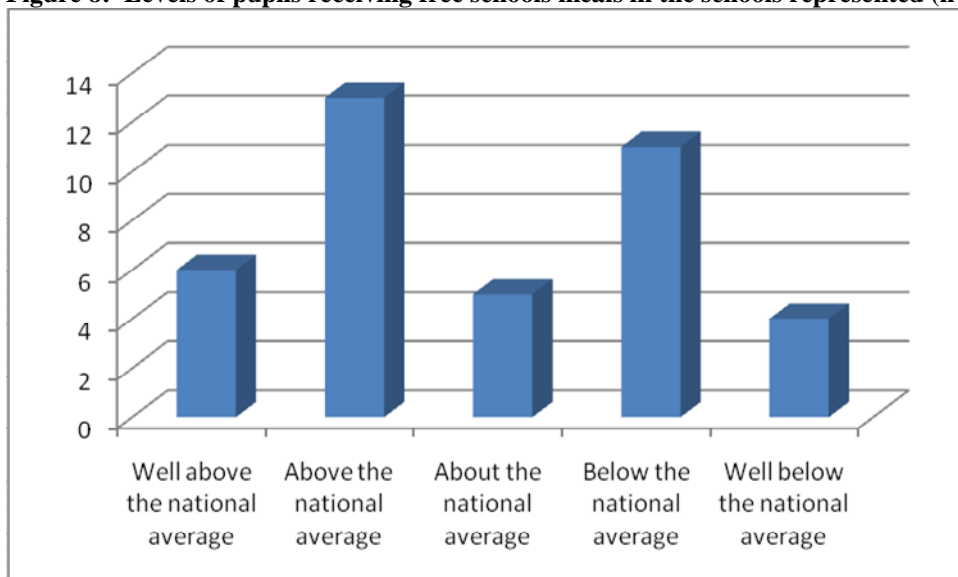
Figure 7: Sizes of schools represented (n=45)



5.6 Number of pupils receiving free school meals

Using numbers of pupils receiving free school meals as an indicator of the socio-economic backgrounds of the pupil catchments of the schools involved (reported by Ofsted), schools represented the full range of socio-economic backgrounds. For those where data was available from Ofsted reports, there were 6 schools with numbers of pupils receiving free school meals well above the national average, 13 above the national average, 5 at about the national average, 11 below the national average, and 4 well below the national average (see Figure 8).

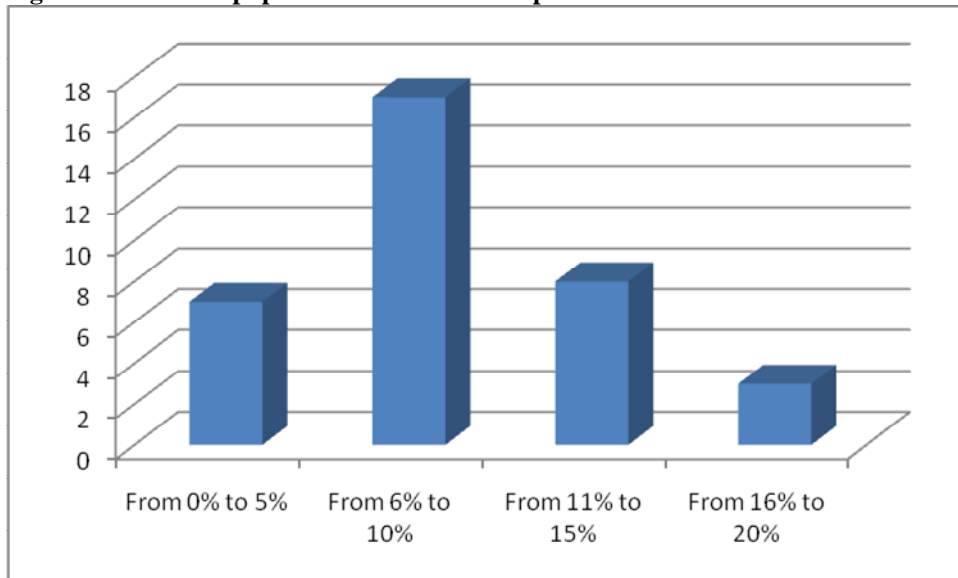
Figure 8: Levels of pupils receiving free schools meals in the schools represented (n=45)



5.7 Number of pupils with statements of special educational needs supported through School Action Plus

Schools within the sample ranged widely in terms of numbers of pupils with statements of special educational needs supported through School Action Plus (reported by DFE and Ofsted). Two of the schools were special schools, catering for pupils with mild or more severe learning difficulties. Of the remainder (and for those where there were Ofsted reports of numbers with statements), the range spread from a minimum of 1% to a maximum of 18%. Of the schools with reports of statements, 7 were within the range from 0% to 5%, 17 within the range 6% to 10%, 8 within the range from 11% to 15%, and 3 within the range 16% to 20% (see Figure 9).

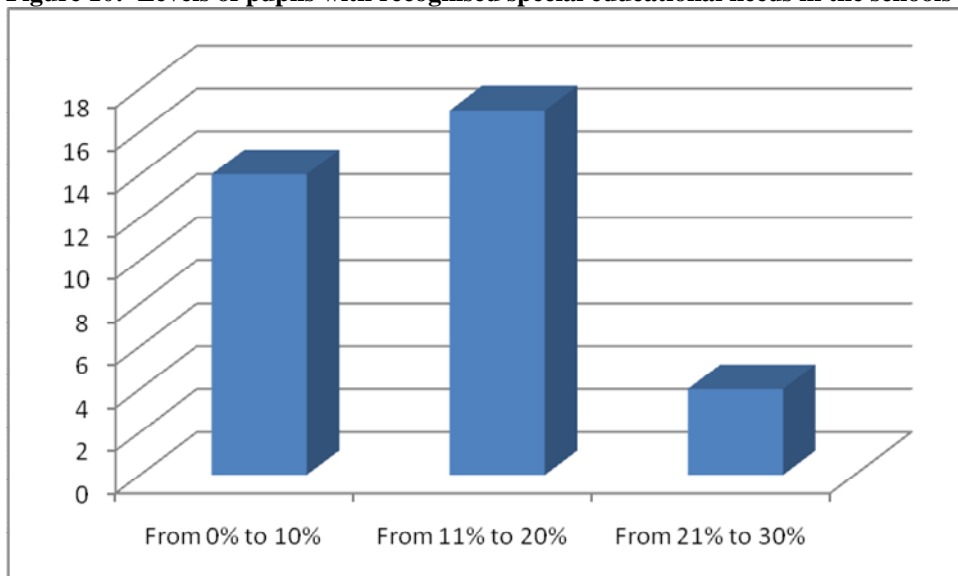
Figure 9: Levels of pupils with statements of special educational needs in the schools represented (n=45)



5.8 Number of pupils with special educational needs but without statements

Schools also widely ranged in terms of those with reported numbers of pupils with special educational needs but without statements. The range spread from 4% to 26%. Of these, 14 were within the range from 0% to 10%, 17 were within the range from 11% to 20%, and 4 were within the range from 21% to 30% (see Figure 10).

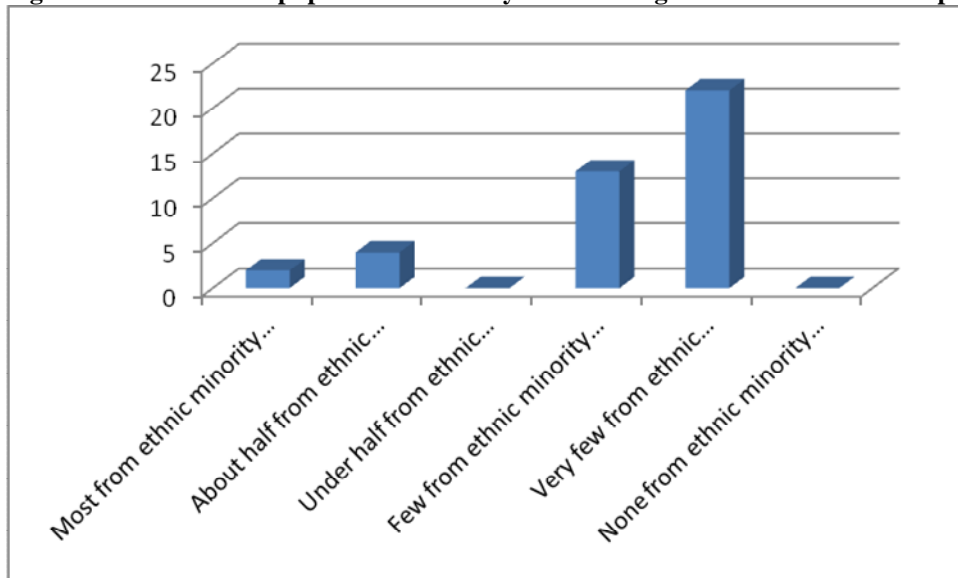
Figure 10: Levels of pupils with recognised special educational needs in the schools represented (n=45)



5.9 Number of pupils from minority ethnic backgrounds

Schools in the sample ranged widely in terms of numbers of pupils from ethnic minority backgrounds. Using the most recent Ofsted reports (and categorising on the basis of those reports), 4 schools catered for pupils where the majority were from minority ethnic backgrounds, 2 where most were from minority ethnic backgrounds, 4 where about half were from minority ethnic backgrounds, none where under half were from ethnic minority backgrounds, 13 where there were few from ethnic minority backgrounds, 22 where there were very few from ethnic minority backgrounds, and none where there were no pupils from ethnic minority backgrounds (see Figure 11).

Figure 11: Numbers of pupils from minority ethnic backgrounds in the schools represented (n=45)

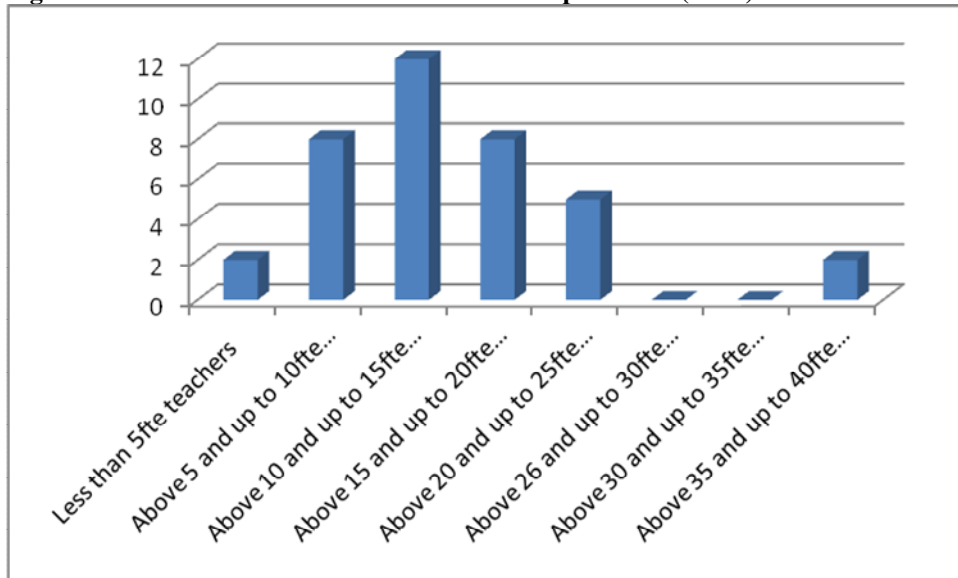


5.10 Number of teachers in the school

Ofsted reports or school websites were used to source details about teacher numbers within the schools. With respect to these figures, some primary schools listed art teachers or music teachers separately, but total teacher figures quoted here have included where possible a full-time equivalent (fte), giving numbers of class teachers including the head teacher and deputy head teacher, in order to gain comparative views of pupil to teacher ratios.

The schools involved ranged from 3.5 to 37 fte teachers. Of those where details were available, 2 schools had less than 5 fte teachers, 8 had above 5 and up to 10 fte teachers, 12 had above 10 and up to 15 fte teachers, 8 had above 15 and up to 20 fte teachers, 5 had above 20 and up to 25 fte teachers, none had above 26 to 30 fte teachers, none had above 30 to 35 fte teachers, but 2 had above 35 and up to 40 fte teachers (see Figure 12).

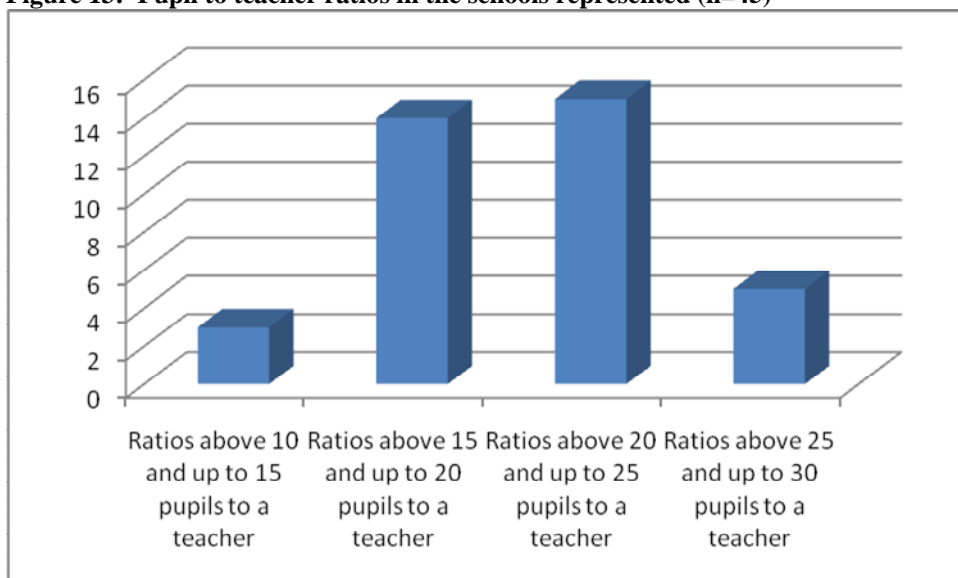
Figure 12: Numbers of teachers in the schools represented (n=45)



5.11 Pupil to teacher ratio

In terms of the pupil to teacher ratios of the schools (using pupil and teacher numbers gathered from sources stated in previous sub-sections above), these varied widely from 11.7 pupils to a teacher to 27.0 pupils to a teacher. Across the schools where data was available on pupil and teacher numbers, there were 3 schools with ratios above 10 and up to 15 pupils to a teacher, 14 schools with ratios above 15 and up to 20 pupils to a teacher, 15 schools with ratios above 20 and up to 25 pupils to a teacher, and 5 schools with ratios above 25 and up to 30 pupils to a teacher (see Figure 13).

Figure 13: Pupil to teacher ratios in the schools represented (n=45)



5.12 Numbers of classes in the school

Schools were asked how many classes they had. The numbers ranged from 3 to 21, with many schools having either one-form entry (5 to 9 classes) or two-form entry (15 to 19 classes), including classes for nursery age children. Full details are shown in Table 3 following.

Table 3: Frequencies of classes in the schools

Number of classes	Frequency
20 or more	3
15 to 19	9
10 to 14	14
5 to 9	17
1 to 4	2
Total	

This distribution indicates that schools involved represented small as well as large primary schools.

5.13 Schools with mixed year group classes

Schools were asked whether they had classes with mixed years or ages in them, and which age groups were involved if this was the case. In 27 cases the classes did not have mixed year groups, in 1 case the school was to have mixed classes the following year, and in the other cases year groups were mixed into classes (these were mainly mixes of years 3 with 4, and 5 with 6, but in some cases there were mixes of years 1 with 2, and years 2 with 3, and in a small number of cases the mix involved years 4 and 5, in one case years R and 1, in one case years R, 1, 2 and 3, in one case years 2, 3 and 4, and in one case years 4, 5 and 6).

5.14 Mixed ability classes

Interestingly, in the case of all but one of the 45 schools, classes were mixed ability. In one school, there was one class within a language unit (it was presumed that these children all had language needs, although these needs might clearly vary quite considerably).

5.15 Classes setted or banded or streamed for English, mathematics, or science

Although classes in the schools generally were mixed ability, there were schools that setted or banded or streamed for certain subjects in certain years. Details of these are shown in Table 4 following.

Table 4: Frequencies of classes setted or banded or streamed in the schools

Year group	Subject	Frequency
6	Mathematics	15
	English	11
	Science	3
5	Mathematics	11
	English	7
	Science	3
4	Mathematics	7
	English	4
	Science	1
3	Mathematics	9
	English	4
	Science	1
2	Mathematics	5
	English	1
1	Mathematics	3
	English	1

These data indicate that the most commonly setted or streamed or banded subjects are mathematics and English, most commonly in years 3 to 6. Mathematics is the subject that is most commonly setted or banded or streamed, and year 6 is when streaming or setting or banding most commonly occurs. In addition to grouping pupils in these ways, two schools commented that: “we do have a large percentage of EMAS [Ethnic Minority Achievement Service] children some of whom will have focussed teaching in small groups with EMAS teachers”, and “Our Year 1 and Year 2 children are taught in separate classes for English and Maths”.

5.16 End of Key Stage 2 SAT results for 2007 in English, mathematics and science

Schools involved varied in terms of SAT results at the end of Key Stage 2 that were reported in 2007 for pupils achieving Level 4 and above. The achievement levels ranged from, at the lowest level, 38% in English, 42% in mathematics, and 49% in science, to, at the highest level, 100% in English, 99% in mathematics, and 100% in science. With results from 34 schools, the median level was 69.5% in English, 63.5% in mathematics, and 74% in science.

Schools involved varied in terms of SAT results at the end of Key Stage 2 that were reported in 2007 for pupils achieving Level 5 and above. The achievement levels ranged from, at the lowest level, 6% in English, 9% in mathematics, and 18% in science, to, at the highest level, 64% in English, 64% in mathematics, and 91% in science. With results from 34 schools, the median level was 25% in English, 22% in mathematics, and 38% in science.

5.17 End of Key Stage 2 SAT results for 2008 in English, mathematics and science

Schools involved varied in terms of SAT results at the end of Key Stage 2 that were reported in 2008 for pupils achieving Level 4 and above. The achievement levels ranged from, at the lowest level, 66% in English, 64% in mathematics, and 64% in science, to, at the highest level, 100% in English, 97% in mathematics, and 100% in science. With results from 34 schools, the median level was 68% in English, 68.5% in mathematics, and 78% in science.

Schools involved varied in terms of SAT results at the end of Key Stage 2 that were reported in 2008 for pupils achieving Level 5 and above. The achievement levels ranged from, at the lowest level, 7% in English, 13% in mathematics, and 18% in science, to, at the highest level, 55% in English, 54% in mathematics, and 78% in science. With results from 34 schools, the median level was 21% in English, 24.5% in mathematics, and 37% in science.

5.18 End of Key Stage 2 SAT results for 2009 in English, mathematics and science

Schools involved varied in terms of SAT results at the end of Key Stage 2 that were reported in 2009 for pupils achieving Level 4 and above. The achievement levels ranged from, at the lowest level, 60% in English, 57% in mathematics, and 69% in science, to, at the highest level, 97% in English, 98% in mathematics, and 100% in science. With results from 34 schools, the median level was 64.5% in English, 65% in mathematics, and 72% in science.

Schools involved varied in terms of SAT results at the end of Key Stage 2 that were reported in 2009 for pupils achieving Level 5 and above. The achievement levels ranged from, at the lowest level, 3% in English, 14% in mathematics, and 17% in science, to, at the highest level, 71% in English, 60% in mathematics, and 75% in science. With results from 34 schools, the median level was 15% in English, 21% in mathematics, and 31.5% in science.

6. USES OF ESPRESSO RESOURCES IN SCHOOLS AND LEARNING OUTCOMES

6.1 Findings about uses of Espresso resources

Questionnaires were used to ask schools details about the ways they used Espresso resources. These details are collated and reported here.

6.2 Where Espresso is accessed

Schools were asked whether Espresso resources were accessed in classrooms or in an ICT suite or both. Across all schools, Espresso was clearly accessed across the whole range of hardware accessible, whether that was desktops or laptops in classrooms, in an ICT suite, or in an assembly hall. The width of access was illustrated by responses from a number of schools: “Espresso available on all computers throughout the school and is accessed in all areas”, “We have an ICT suite with 15 computers which is used for Espresso. All Key Stage 2 classrooms have a desktop computer which can be used to access Espresso. All classes in the school have interactive whiteboards with Espresso access”, “Espresso can be accessed in all our classrooms, SEN rooms, ICT suite and assembly hall”, “in every class there are six computers ... in year five and six, in those classes we have individual laptops for every child”. Two schools also referred to home access, for both teachers and pupils: “Yes – available everywhere – on all teacher and pupil machines and available at home through Merlin. We have 4 ICT suites across the school. We also have two sets of 15 PDAs with Espresso Go on them”, and “Accessed everywhere within and outside school (we have home subscription for staff and children – link is within VLE).”

6.3 Whether class teachers access Espresso through laptops or desktops

Across the schools, teachers accessed Espresso through both laptops and desktops. In 25 cases it was through both forms of hardware, in 3 cases mostly through desktops (with some laptop access), while in 10 cases it was through laptops alone, and in 7 cases it was through desktops alone.

6.4 Whether Espresso is accessed through an interactive whiteboard in each room

It was clear that many schools (37 in total) had interactive whiteboards in all rooms (including ICT suites), and in 3 cases in all rooms except one or except in the ICT suite. In one school year 3 classrooms had interactive whiteboards, year 4 classrooms were to receive them in 2010, but all classrooms had projectors. In another school there were interactive whiteboards in year 3 and 6 classrooms, and in yet another school they did not have an interactive whiteboard as such, but had a large screen version. In one school a fire had meant that 9 classes were unfortunately without an interactive whiteboard.

6.5 The year groups or classes that use Espresso

For the vast majority of the schools, Espresso was used across their entire age ranges. For some schools this involved nursery classes as well as reception to year 6 classes (examples illustrating this range are shown in Figure 14). Some schools mentioned access in clubs that were run before and after formal class times.

Figure 14: Examples illustrating width of resources across the nursery to year 6 range



6.6 Whether some classes use Espresso more than others

Across the schools there was wide reported use, and for many schools (some 31), this was across the school. In 14 cases out of the 45, varied use across year groups or classes was reported. From this smaller number of cases where variation was reported, it was often in years 3 and 4 that greater use seemed to happen, although greater use in reception classes, or years 1 and 2, or in years 5 and 6 was reported in some schools. As one teacher said, “I would say that the years three and four use Espresso a lot with their English work. They usually start from the Key Stage 1 package because we use it to start off English as a second language. Also, we’re quite interested now in the fact that the children are able to access Espresso from home from September”. Some schools indicated that learning approaches appropriate to age made a difference in terms of how Espresso resources were used in different parts of a school. For example, as one school stated: “It is used consistently throughout the school. More independent learning using Espresso is done in KS2, more teacher-led in FS/KS1.”

6.7 How often Espresso is used (related to the highest usage in the school)

It was clear that some teachers used Espresso a great deal. Schools were asked how often resources were used by those that used it most. Details of responses are shown in Table 5 following.

Table 5: Regularity of use by high level users in the schools

Regularity of use	Frequency
About once every two weeks	2
About once a week	5
More than once a week	20
About once a day	8
Once or more a day	7

Across the schools, it appeared that use of Espresso resources commonly occurred more than once a week, suggesting perhaps twice a week might have been a rough average.

6.8 Whether certain types of resources are used most regularly

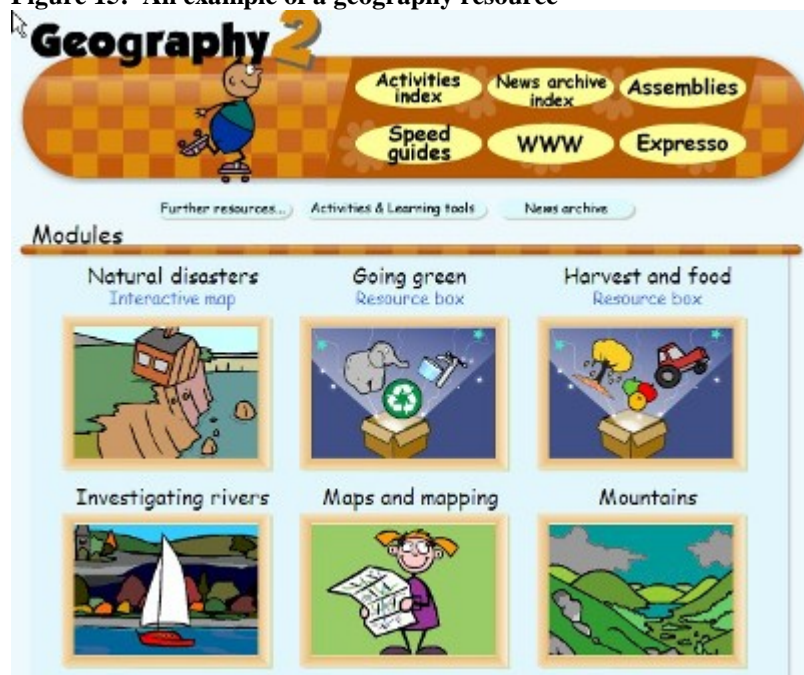
Schools were asked whether certain types of resource were used regularly. Their responses are shown in Table 6 following.

Table 6: Resources used most regularly in the schools

Resource	Frequency
News	23
Mathematics activities	15
Video clips and items	14
Geography and Humanities units/topics	14
Science units/topics	13
Resource boxes (such as pirates, or World War 2)	9
Literacy and phonics-based activities	9
RE and faith modules	5
PSHE items	3
Subject-specific resources	3
Art and sculpture items	3
Authors and their works	3
Interviews	2
Stories and sounds for the Foundation Phase	2
Assemblies	2
‘What do you think’ for homework	1
Factfiles	1
ICT items	1
Language resources (French)	1

From this range of schools, news items, mathematics activities, video clip material, geography (see the example in Figure 15), history and humanities material, and science material were reported most commonly to be most regularly used. It was clear, however, that use of certain resources linked to teaching approaches in particular ways. For example, one school reported that: “The video footage is most commonly used as it is of such high quality; staff tend to use the search function on the homepage to find appropriate resources when beginning a new topic”. Uses of resources to support specific aspects of literacy development were also reported by schools. For example, one school reported that: “The stories and sounds areas in Foundation Phase are used regularly. The new sound element is very useful for our English second language children”, while another reported that: “for literacy I think it’s ideal. We have been thinking about that kind of thing [interviews with authors of books] with Welsh authors where you could use the same sort of pattern - film them working, film them reading, film them working with children asking questions of children”.

Figure 15: An example of a geography resource



6.9 Why certain resources are used regularly

Schools were asked why certain resources were used regularly. Their responses varied, and covered a range of reasons, including ways that resources supported planning, to ways that resources provided up-to-date or ‘real’ materials. Recognised quality was an important aspect that was highlighted by a number of schools; as one teacher said: “Up to date, interest level ideal for children, quality guaranteed.”

One teacher indicated that the resources helped to cover a wide range of topics, and they were engaging for pupils: “They help to ensure good coverage of National Curriculum objectives. Fun and interactive resources provide good talking points for class discussion. News items can form the basis of PSHE work. Resource boxes (see the example shown in Figure 16) help teachers to organise the teaching of whole topics as well as providing visual resources to engage children throughout the topic”, while another said they: “Fit very closely to curriculum”, and a third said they are: “Easy to find at short notice and are short and focused”.

Figure 16: An example of a resource box

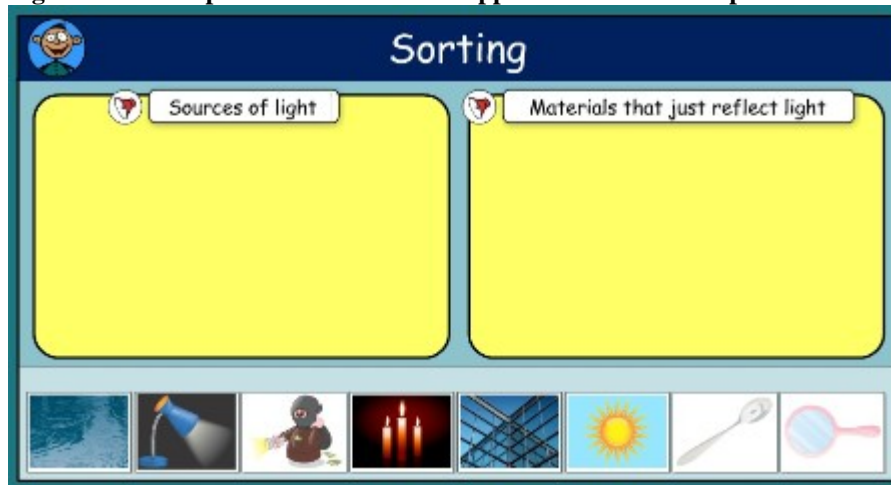


Another teacher indicated that the resources fulfilled needs at particular times: “Good lesson introductions and brain teasers!”, while another teacher indicated that resources fulfilled needs that were not readily accessible otherwise: “Videos can be linked to planning – especially in topic sessions. With French, the school has limited resources and the Espresso content is ideal to help deliver objectives.”

Other teachers indicated that the resources provided up-to-date materials to use in teaching: “News is relevant, interesting and provide good discussion springboards”, and “The news is used more regularly because it changes every week and it’s the real news, so every single week through the year it’s the real news. You may be doing a topic on people who help me and you would use the resources around that topic but you’d only be doing that topic for six weeks or something. Certainly you wouldn’t be using that topic everyday all through the year. It’s a real time resource because the news it literally changes every week and it is based on the real news, on what’s happening in the world. It’s a very child-friendly version so the children can listen to that all the time, every week. What we do with news is we do podcasts based around it”. Another teacher indicated that Espresso resources could support learning in a range of ways, across the school: “All teachers agree that the Espresso news is a great way of informing pupils about important events. Resource boxes and topic areas give additional activities, resources for lessons. Teachers and pupils can use the video clips to enhance learning resources and often use them within MS PowerPoint presentations.” Yet another teacher indicated that the resources could be managed within other technologies used in the school: “Videos can be embedded into the VLE which means that pupils can access them from home. They also work well as starters for lessons encouraging discussion”.

The visual aspects of the resources were highlighted by some teachers: “They offer resources on quite specialist areas that can sometimes be abstract for children to understand or difficult to observe first hand in the classroom – therefore the videos help to capture their imagination”, and “Excellent visual aids that can be slotted into already existing planning”, and “I’d cite the use of video again. Concepts such as erosion and deposition (in the context of a river study) are brilliantly illustrated by Espresso through the videos. Still images aren’t as effective. And maybe where an actual river study is not an option for whatever reason, the next best thing is video”. The interactive nature of the resources was also commented on by a teacher, who said: “They are easy to access and fit well into the curriculum, providing the children with an interactive approach to learning.” The relationship between the visual nature of the materials, and their abilities to support the understanding of concepts (see the example shown in Figure 17) was highlighted by one teacher, who said: “They find the science clips very helpful to introduce or explain abstract concepts which would take too long to model in the classroom. The examples of real life science are particularly powerful and stimulate discussions.”

Figure 17: Example of a resource that supports a science concept



Accessibility was highlighted by a number of teachers, including a teacher from a special school, who said that: “As we are an MLD school, with 11-16 year olds working mostly at NC Levels 1-2, Espresso provides us with content that is accessible for our pupils, with a user interface that staff and pupils find consistent and easy to use”. Support for pupils with special needs was highlighted by another teacher, who said: “Maths resources used a lot by SEN groups.”

6.10 Whether resources are used to support literacy or numeracy

Schools reported that resources were used to support both literacy and numeracy (an example of a resource supporting literacy is shown in Figure 18). In many schools (in 31 cases) this was both, while in other cases there was more focus on either numeracy (in 4 cases) or literacy (in 8 cases). In 2 cases, use was reported to be lower than for other subject areas or topics, either because there were gaps in what the resources covered, or there was more use of traditional methods.

Figure 18: An example of a resource supporting literacy



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An interesting example of the resources to support literacy development was provided by one school: “we’re a Welsh medium school where 97% of our pupils are from Welsh families, or bilingual families. The Key Stage 1 as the Welsh call it, or the Foundation Stage as they call it now in Wales, we concentrate on the Welsh language only. We don’t start English, or formally anyway, until year three after they leave Foundation Stage. That gives them a sound background in their own first language. So that means that we really use Espresso only in Key Stage 2. We use the materials from Key Stage 1 to develop our English second language to start off with”.

Some schools indicated that they used non-Espresso resources more for literacy or for numeracy. For example, one school said that resources were: “Not used much for numeracy perhaps as we have Maths Whizz and Abacus for this.”

6.11 Espresso resources used to support cross-curricular themes

Schools generally indicated that Espresso resources were used to support cross-curricular themes and topics. Table 7 following indicates the specific topic areas that schools mentioned.

Table 7: Resources used to support cross-curricular themes in the schools

Resource	Frequency
History	6
Geography	5
Pirates	5
Sustainability	5
Tudors	5
Fire of London	4
Science	4
World War 2	4
Faiths	3
France/French/MFL	3
PSHE	3
Space	3
Victorians	3
A sense of place	2
Changing states	2
Citizenship	2
Egyptians	2
Electricity	2
Materials	2
Toys	2
Transport	2
20 th Century Timeline	1
Anti-bullying	1
Around the world	1
Art themes	1
Assemblies	1
Authors	1
Autumn	1
Black history	1
Buildings and homes	1
Christmas	1
Coasts	1
Diwali	1
Easter	1
Eco-schools	1
Farming	1
Festivals	1
Figures in history	1

Resource	Frequency
Film making	1
Food	1
Forces	1
Greeks	1
Growing	1
Habitats	1
Landscapes	1
Maps	1
Mountains	1
Moving on	1
Olympic Games	1
Ourselves	1
Passport	1
Rainforests	1
Remembrance Sunday	1
Rivers	1
Romans	1
Romans	1
Settlements	1
Sound	1
Spring	1
Teeth	1
The Blitz	1
The Evacuation	1
Time travellers	1
Traffic safety	1
Travel	1
Vikings	1
Volcanoes	1
Water	1
Weather	1

It was clear that the list was wide, and that different schools found different resources to use for a wide range of topics. As one teacher said, “There’ll be a list of about a million. When we did Remembrance Sunday; when we did caterpillars to butterflies; on growing there’s stuff on growing; when we do electricity there’s stuff on electricity. I could go on and on because almost every sort of thing that you could do.....even me in assembly, when I do walk to school week, you know road traffic safety and things like that”. The importance of the width of resources for some schools was highlighted by the responses that teachers provided. For example: “At [A] we teach a creative curriculum with the majority of subjects being taught through a termly theme. Espresso provides many resources which support teachers in delivering their themes. For example, the theme pirates is taught in year 3, the pirate resource box, as well as the Vikings section in History 2 are utilised heavily during this theme to support teaching” (see the example in Figure 19).

Figure 19: Example of a resource supporting a history topic on Vikings



6.12 What benefits teachers gain from using Espresso

When asked about the benefits that teachers gained, responses were wide ranging. A number of themes did emerge, however, and examples of responses illustrating teacher reasoning behind these forms of gains are offered here.

Some responses concerned the fact that there were a very wide range of resources available, which teachers could easily access and choose from:

- “Resources all in one place, high quality, short, snappy videos, easy to plan, easy to make ICT links to other subjects.”
- “It is unique in how many videos are available.
- “Relevant, motivating, excellent quality, easy to navigate, linked to planning.
- “High quality resource that matches curriculum needs, motivating for children.
- “Quick and easy to access and easy to navigate.
- “Ease of access to resources, including home access. Large variety of resources to choose from.”
- “Also as (especially) videos are hard to access through school networks, it’s ideal to use within school.”
- “It frees up time from making resources.”
- “They save an awful lot of time and present things in an interactive inspiring way.”

Some responses concerned the fact that access to resources supported planning and curriculum needs:

- “A resource which can be planned with at home, adaptable to fit our curriculum, support visual learners good for class and individual learning.
- “There is always something that fits with what they are doing; it is very child friendly and easy to use.
- “What you’ve got is you’ve got all the elements there, you’ve got if you like the commentary element, you’ve got the links websites, it’s a complete solution isn’t it and activities.”
- “Resources found are at the right level for primary pupils. Reasonably easy to find cross curricular links. Home access makes planning easier [see the example shown in Figure 20]. Knowledge that resources are pitched at the right level.”
- “Easy access to high quality material that is focussed .reduces time to find it and increases focus on planning the learning.”

Figure 20: Resources can be accessed at home supporting teacher planning



Some responses concerned the fact that resources were up-to-date and kept up-to-date, and could enhance the teacher's own areas of knowledge:

- “Also the regular updates, up to date news make it a very current resource. These are the main reasons the teachers like to use Espresso.
- “An interactive and stimulating resources that has an updated and extensive range of resources.
- “Interactive and up to date information.”
- “Develop teachers’ subject knowledge.”
- “Espresso helps the staff to improve some of their subject knowledge prior to teaching.”

Some responses concerned the fact that resources were known to be safe, usable and reliable:

- “Resources are safe and reliable, high quality and relevant.
- “Suitable for children without searching, current info, good variety, interactive, children love it!
- “The class are more captivated by the topic concerned. Teachers are more confident in the high quality of the resource – they’ve come to expect high standards from Espresso where other online resources can vary in quality. Moreover, Espresso, as it is cached, is always available. Again, it comes back to confidence. They can rely on Espresso.”

Some responses concerned the fact that learning approaches were matched to the forms of resources that were provided:

- “Children find the resources engaging and fun and are suitable [for] visual, auditory and kinaesthetic learning styles.
- “These appeal to children, particularly our English second language children as they can still gain an understanding of what is going on.
- “Easily accessible and highly quality resources which help children to visualise the learning/topic being studied – in addition to generating interest or initiating discussion.
- “Saves time making own resources, lots of interactive activities, very good for visual learners and promoting independent learning.
- “How they gain is because the resources, the Espresso resources are media rich so there is nearly always a video with good explanation so they appeal to our young learners who are in the infant school, the children can’t read loads of text so of course because they’re visual and they’re auditory as well they can hear things so that’s particularly good for their learning. There are also activities that they can practice afterwards as well but it is particularly the media rich video clips etc which teachers can use directly as they are or they can just save off those resources and put them in into their own resources.”

6.13 Benefits pupils gain by using Espresso

Schools reported wide benefits for pupils. A number of themes emerged, and these are outlined here, with some comments that illustrate the forms of responses that teachers gave.

One teacher reported benefits in terms of the match of the resources to the background contexts of pupils:

- “Correctly pitched at their age/level.”

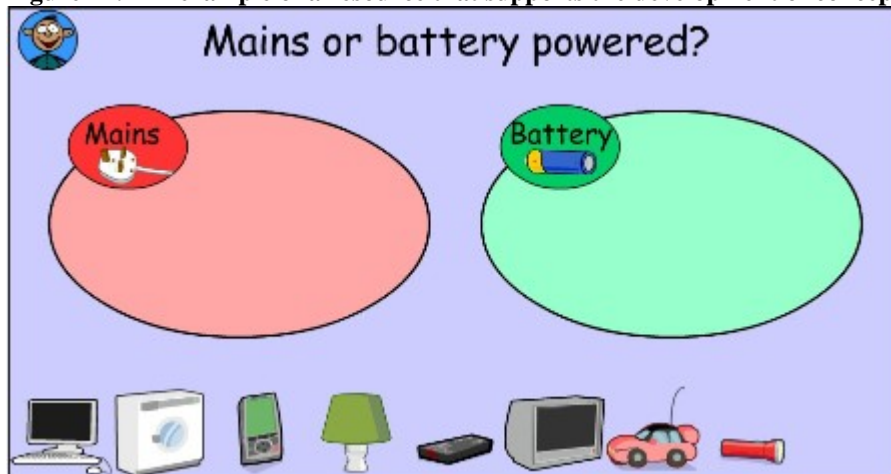
Some teachers reported benefits in terms of the match of the resources to learning approaches of pupils:

- “Engagement is a huge benefit as well as the fact that visual, auditory and kinaesthetic learning styles are catered for.
- “Children feel more excited when work is interactive.
- “Generally, with Espresso, multiple learning styles are catered for – visual, auditory, etc. There’s a greater ‘hit’ rate as far as capturing the child’s fullest attention goes. The various tools available – such as muting the picture on video whilst maintaining the sound – also enable teachers to ‘work’ particular channels. Put simply, information is often more memorable when delivered with the use of Espresso.”

Some teachers reported benefits in terms of the support that resources offered in terms of conceptualisation (see the example shown in Figure 21):

- “Visual aids e.g. earth orbiting sun.
- “Puts mathematical topics into real life contexts.”
- “Ease of explaining a tricky concept.”

Figure 21: An example of a resource that supports the development of concepts concerned with electricity



Some teachers reported benefits in terms of pupils being stimulated to externalise or extend their ideas:

- “The resources have supported children in creating high quality pieces of work, such as multimodal texts, which have resulted in increases in their motivation and self esteem.
- “Children are motivated to complete activities but this may not be solely due to Espresso more to the fact it is a computer-based activity.”
- “Lots of speaking and listening when discussing content.”

Some teachers reported benefits in terms of enhancing participation:

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- “Pupils benefit because it enables them to participate in the lesson through the interactive games / activities.”
- “Individual, paired and group/class activities to enhance shared learning experiences.”

Some teachers reported benefits in terms of resource structure supporting independence of learning:

- “It also allows children to have some independence over their learning – following a route map or using the presentation creator.”
- “Motivation, they love using Espresso, great for research without the endless rubbish found on the internet – they are loving using the learning paths at home for home learning.”
- “Learning Paths make sure that the children are focussed on the learning objectives and have opportunities to independently demonstrate what they have learnt.”

6.14 Engaging pupils visually

Schools were asked whether Espresso resources engaged pupils visually. All 45 schools indicated that they felt that the resources did engage pupils visually. Video clips were highlighted by many schools as resources that provided for this form of engagement, and some teachers highlighted the use of bright colours, news stories, figures or events that could not otherwise be accessed, and interactive activities in supporting this aspect also. Having access to artefacts (man-made and live) was also highlighted as an important element supporting enhanced visual engagement and opportunity.

6.15 Engaging pupils through auditory means

Schools were asked whether Espresso resources engaged pupils through auditory means. All 45 schools indicated that they felt that the resources did engage pupils through auditory means. Again, video clips were highlighted by schools as resources that provided for this form of engagement, but some teachers highlighted further features such as the ability to turn the picture off so that the auditory channel became more prominent, having certain speaking and listening activities available, using sound clips that are available, and having access to modern foreign language resources. Access to interviews with well-known authors, and access to sounds and sound effects were also highlighted as important elements enhancing auditory access and opportunities for pupils.

6.16 Engaging pupils emotionally

Schools were asked whether Espresso resources engaged pupils through emotional means (whether they felt some emotional response or attachment, or some form of empathy, for example). Over half the schools (28 in number) indicated that they felt that the resources did engage pupils through emotional means. However, it was clear that the forms of resources that teachers highlighted in supporting this form of engagement tended to be quite specific. Teachers indicated that PSHE resources, those focusing on families or the news, on RE, citizenship, art in the environment or bullying, all provided opportunities for discussion or reflection on the pupil’s own thoughts or feelings. Clearly using resources in these ways could be highly dependent on approaches that were taken within the classroom, and how this matched the needs of particular learners. However, it was clear that certain resources did support emotional responses and concerns, such as those focusing on the Haiti disaster or on Poppy Day or on refugees (just as the use of the video clip that showed the gathering of empty plastic bottles by some young people to make houses to live in on the beaches of Brazil generated empathetic responses from a class observed in a previous study - see Figure 22).

Figure 22: A screenshot showing the house made of bottles



6.17 Allowing collaborative work to be done

Schools were asked whether Espresso resources allowed collaborative work to be undertaken. From the schools responding, 28 (over half) indicated that they felt that this form of engagement was supported through uses of the resources. It was clear, however, that collaborative work was influenced greatly by the approach that the teacher took. These responses indicated that collaborative work was possible using these resources and that in 28 cases teachers had used the resources in these ways. Examples provided by teachers that illustrated these uses included discussing history artefacts of the Egyptians (see Figure 23), working in groups to discuss the news, working together to solve mathematical problems, asking pupils to work together to find answers (to solve mathematical problems, for example), working in pairs to follow a route map or to research a topic, developing a collaborative mind-map after viewing a video, and asking a group to make their own TV news report in the style of an Espresso news item (where children worked together to write script, report on camera, film, etc.).

Figure 23: An example of a resource showing an artefact of the Egyptians



6.18 Generating ideas

Schools were asked whether Espresso resources helped pupils to generate ideas. Across the schools responding, 40 (the majority) indicated positively that they felt that the resources helped pupils to generate ideas. This was clearly a strong level of positive response. The types of resources that teachers highlighted in this respect were resources to start a story (maybe an adventure story), or to

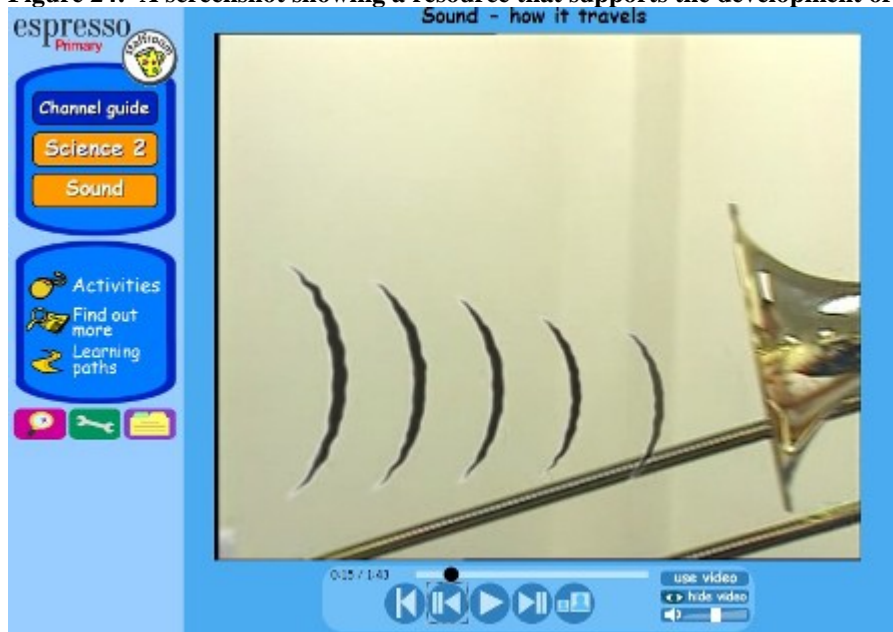
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start a new topic, use of the search tool, video resources, using a news item to discuss positive, negative and interesting things, sculptures, viewing artefacts (those from the Romans, for example), virtual science experiments, and speaking and listening resources.

6.19 Allowing children to understand things more easily

Schools were asked whether Espresso resources allowed children to understand things more easily. All 45 schools indicated that they felt that the resources did allow pupils to understand things more easily. Again, this was clearly a very strong positive response. The sorts of resources that teachers highlighted in supporting this ease of understanding was focused on use of video material, including science clips, exemplifying abstract concepts (such as sound waves - see Figure 24, or those concerned with historical topics), use of materials to consolidate understanding (completing an activity independently at home after some class input), use of interactive activities, being able to do things together and to discuss them and review their ideas (including sending their reviews to Espresso), the use of timelines, and glossaries of keywords.

Figure 24: A screenshot showing a resource that supports the development of the concept of sound waves



As one teacher said, “If you look at the science ones, some elements of science are very, very difficult to explain aren’t they. There are a lot of thing with electricity and so on where you’ve got little clips of video or flash elements and so on that explain things. Teachers in the past have been looking at You Tube and all kinds of different resources and clips of the human body, or movement or looking for video clips that explain what they’re trying to teach. I think children these days want this three-dimensional video-type explanation. They are not satisfied in looking in books anymore; they want the real, if they are looking at the inside of the stomach they want to see the food going down with the camera”.

6.20 Allowing concepts to be developed

Schools were asked whether Espresso resources allowed concepts to be developed. Across the schools, 34 (over two-thirds) reported that they felt that Espresso resources did allow concepts to be developed. Again, this was a strongly positive response. Teachers highlighted a number of resources that they felt supported the development of concepts, such as resources within science units (forces, sound and pitch, or a series circuit, for example), learning paths, the computer modelling reservoir module, the search tool (see Figure 25), resource use followed by the extension of a mind-map that had been

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constructed earlier to ask ‘Now what do we know?’, use of factfiles, estimation in mathematics, and the element at the end of each module asking ‘where do we go from here?’.

Figure 25: A screenshot showing the search tool facility



6.21 Letting children externalise ideas

Schools were asked whether Espresso resources let pupils externalise their ideas. Of the 45 schools, 26 (over half) felt that this aspect of learning was supported by the use of Espresso resources. Where teachers felt that this aspect was accommodated, they highlighted the uses of questions and answers (and open discussion), speaking and listening activities, weekly news reporting, producing special reports, using presentation creator, creating music, and sharing ideas with others through book reviews (including sending off their reviews to Espresso - see Figure 26) in this respect.

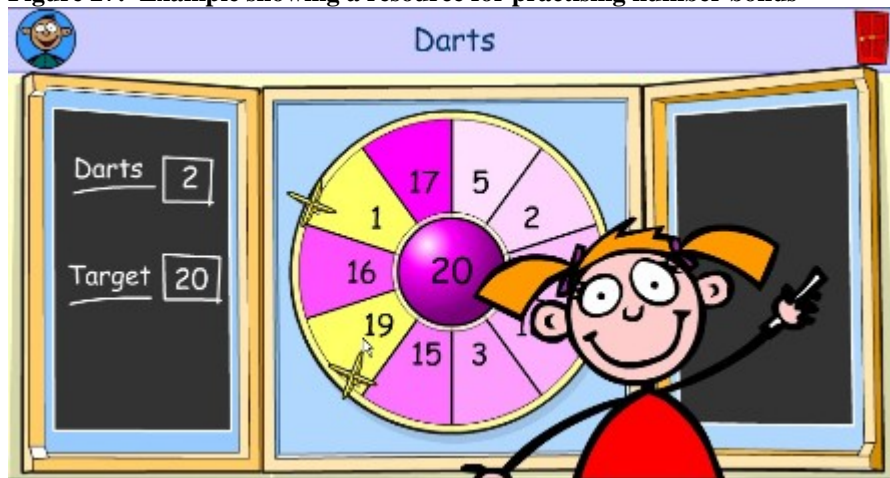
Figure 26: A screenshot showing the facilities to submit book reviews



6.22 Supporting memorisation

Schools were asked whether Espresso resources supported memorisation. Of the 45 schools, 22 (about half) felt that this aspect was supported. The resources that were highlighted by teachers in supporting this aspect of learning were news quizzes, factfiles, interactive games, repetitive activities to rehearse skills (including those in mathematical resources covering number, times tables and phonics), modern foreign language resources (to practise saying words and remembering words), an exercise song, and using stories. As one teacher said, “Things like number bonds, as in the maths where you do want them to remember things. It’s not one of the biggest things that I would use it for because I’m not desperately interested in memorisation of certain things, but however certain things do need to be internally just remembered” (see Figure 27).

Figure 27: Example showing a resource for practising number bonds



Some researchers believe that focusing on memorisation to improve examination results is not the best way to support learners in terms of achievement. Recently, an article in *The Guardian* (Shepherd, 13th August 2010) pointed to research findings (Watkins, 2010), stating that, “Children perform best in exams when teachers are not overly concerned about their test results, according to research published today. Pupils show greater motivation, are better behaved and are more likely to be independent and strategic thinkers when teachers are not obsessed by grades, the study by the Institute of Education found.” The reports from schools using Espresso suggested that their focus was on learning, rather than being overly concerned with memorisation and ‘teaching to the test’. Correlation analyses undertaken in the study and reported in Chapter 4 consider this hypothesis more.

6.23 Getting wider ideas about topics or subject areas

Schools were asked whether Espresso resources supported pupils in allowing them to get wider ideas about topics or subject areas. Of the 45 schools, 44 indicated that they felt that the resources supported learning in this way. This was clearly a highly positive result. Teachers highlighted a range of resources (and widely) where they felt support was provided in this respect. These resources included being able to research on their own (perhaps at the start or end of a topic), being able to follow learning paths, using search functions, having access to resource boxes, history and geography units (on the Great Fire of London, or on other countries or the environment, or on fair-trade - see the example in Figure 28) or sustainability, for example), being able to use a digital microscope, science topics such as those on space, having concepts embedded in real-life examples, language activities (including access to resources about France when trips were not possible), video clips, fact files, web links, and newspaper articles.

Figure 28: A screenshot showing a resource on fair-trade



6.24 Allowing previous learning to be built on easily

Schools were asked whether Espresso resources allowed previous learning to be built on easily. Of the 45 schools, 37 schools (the majority) felt that this aspect of learning was accommodated through the use of the resources. Teachers highlighted a number of resources (including games, videos, learning paths and web links - see Figure 29) that they felt supported this aspect of learning. Some indicated more specific resources such as history units and research on history topics, science materials on forces in motion, the geography passport, resource boxes, developing mind maps, using factfiles, and route creator in topic work. The importance of the pedagogical approach taken in this respect was highlighted by some teachers, who said, “Resources build from KS1 onwards”, there is “Progression in units from KS1 to KS2,” and “Usually you have used the modules to start stuff off and then go onto your own classroom ideas and so on, and come back to it. We are still really using theme work, as the basis. We try to use their ideas as we develop the first few weeks of the theme”, and you can “Use resources to recap previous lessons: reshow video etc.” One teacher indicated that building on earlier learning was enhanced “by saving [a] pupil's profile”, while others indicated the importance of “Returning to an activity to recap” and “Revisiting things through video clips and activities.” One teacher indicated how resources enabled a building on previous learning for pupils with special educational needs, through “Use of Route Creator for SEN pupils – build on previous routes.”

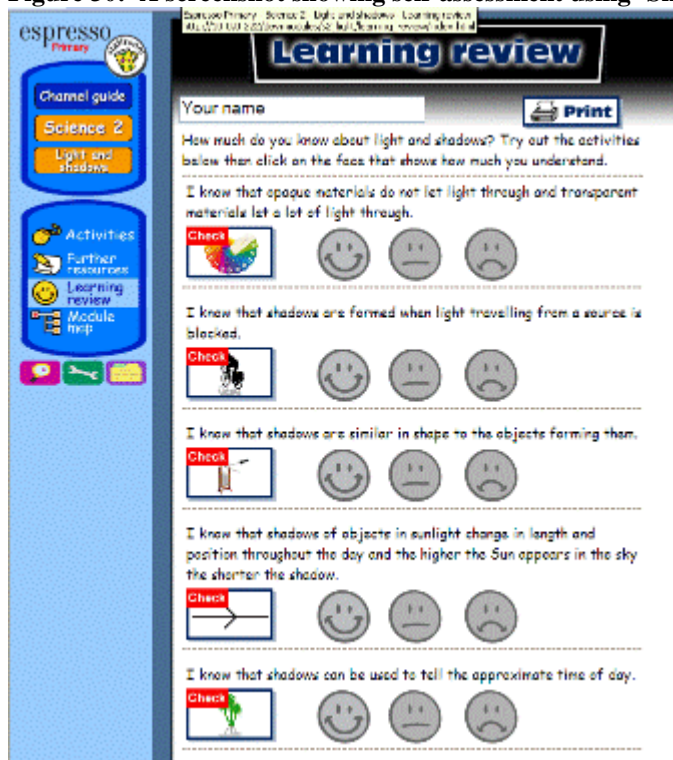
Figure 29: A screenshot showing web links within the resources



6.25 Enhancing review or reflection of pupils' learning

Schools were asked whether Espresso resources enhanced the reviewing or reflection of pupil's learning. Of the 45 schools, 26 (over half) felt that this aspect was supported by the resources. Where teachers indicated resources used to support this aspect of learning, they highlighted where learning assessments were included, multiple choice quizzes, word games, pupils reflecting on their learning and where and how they had found information, self-assessment using 'Smiley faces' in science (see Figure 30), teacher questioning, debates about the content of some videos, discussions about how to apply skills to new situations, writing notes about videos, and reviewing what had been learned at the end of a session. As one teacher said, this opportunity was provided by "Learning paths, returning to content already viewed and recapping and extending – e.g. science earth and beyond section."

Figure 30: A screenshot showing self-assessment using 'Smiley faces'



6.26 Enhancing the development of learning strategies

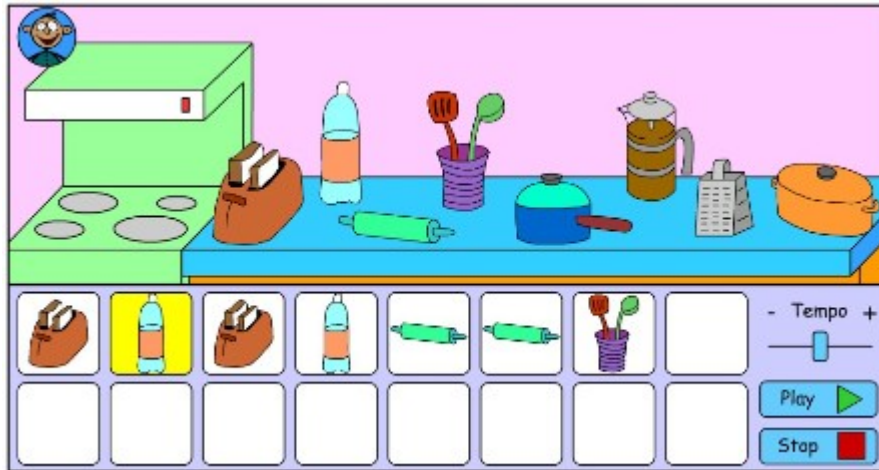
Schools were asked whether Espresso resources enhanced the development of learning strategies for pupils. Of the 45 schools, 22 (half) felt that resources did support this aspect of learning. In particular, teachers highlighted the development of independent work in supporting this aspect, such as researching, skimming and scanning. Where specific examples were given, most were concerned with learning strategies that related to mathematics (Maths Mansion, or numeracy place value cards). This was an aspect that clearly depended on the pedagogic approach taken by the teacher; and in some responses it was clear that teachers were confusing learning strategies with pupil preferences for sensory engagement in learning.

6.27 Allowing children to amend or alter their ideas

Schools were asked whether Espresso resources allowed pupils to amend or alter their ideas. Of the 45 schools, 18 (below half) felt that the resources did support this aspect of learning. Resources highlighted by teachers that supported this aspect were science and music making (see Figure 31), interactive activities that allowed pupils to have several attempts (where pupils scored points and saw their final results at the end), the computer modelling reservoir module, and guidance provided for

pupils with routes through activities. Interestingly, one teacher would have liked to develop this aspect more, saying “Tend to use as a starting point – need to develop this myself – any ideas??”

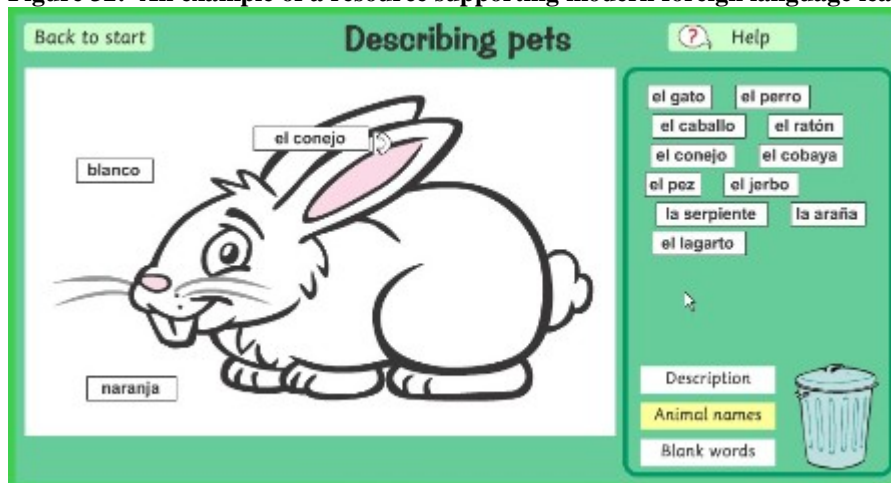
Figure 31: An example showing music making facilities



6.28 Positively motivating pupils to learn

Schools were asked whether Espresso resources positively motivated pupils to learn. All but one of the 45 schools indicated that they felt that the resources did motivate pupils to learn positively. Teachers highlighted not only the diversity of resources as being motivating in themselves, but also highlighted ranges of resources that they felt supported this aspect of learning - multiple choice quizzes (as pupils enjoyed the challenge these offered, and might want to improve on scores next time), media-based resources (that engaged pupils), using computers (which pupils enjoyed), ease of access and the range of information available, music maker, video clips (that gave learning ‘real’ connections), resource boxes, interactive resources (such as fractions in Key Stage 2, used in one-to-one numeracy tuition), timelines, modern foreign language activities (see Figure 32), PE gymnastics, and weekly news. Some teachers indicated that pupils showed their motivation by their actions, as “At lunchtime and after school activities the [pupils] desire to use Espresso as a free choice”, and their willingness to be involved when asked questions in plenaries such as “we can complete the next activity at the end of this session, who can show what they have learned.”

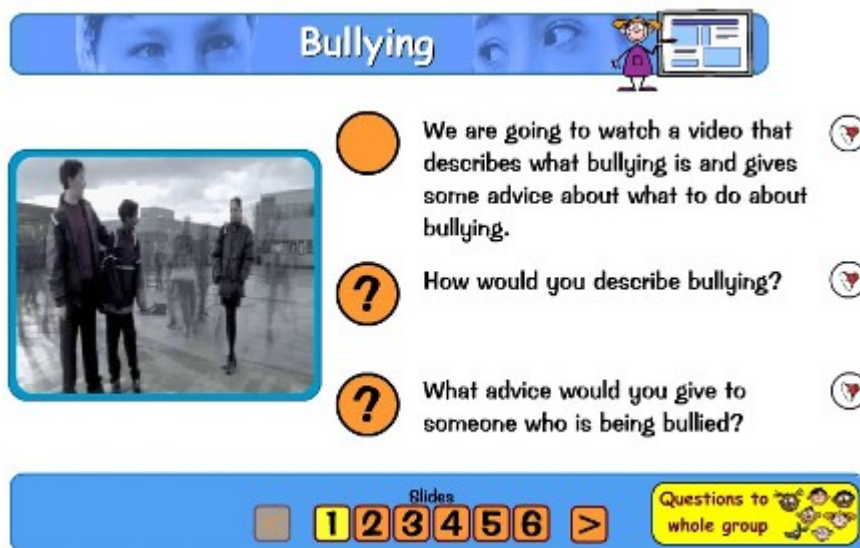
Figure 32: An example of a resource supporting modern foreign language learning



6.29 Supporting social aspects of learning

Schools were asked whether Espresso resources supported social aspects of learning. Of 45 schools, 37 (the majority) felt that resources supported this aspect of learning. Teachers highlighted resources that they felt supported this aspect, pointing out news items, transition to secondary school, items generating discussion, items on families, discussing rights, differences and democracy, assembly items (about how pupils felt, or about bullying - see Figure 33, or about rules, for example), PSHE resources (highlighted by many teachers), links to social and emotional attitudes to learning (SEAL) materials, resources supporting working with partners, and moral issues. As one teacher said, "That's one of its strengths. There are some very, very good modules with social, and looking at other countries and so on, and communities and different backgrounds and social differentiation. I think there are some very good modules there".

Figure 33: An example of a resource on bullying



6.30 Preparing children for the future

Schools were asked whether Espresso resources prepared children for the future. Of the 45 schools, 19 (just below half) felt that resources did support this aspect of learning. Teachers highlighted resources that they felt supported this aspect, particularly the PSHE resources on 'Moving on', and sustainability resources. As one teacher said, "Yes there's a whole unit on transition ... you [can] look at some children who go to secondary school, or going on to junior school and what it's like the first day in schools etc. They video real children and real children talk about their experiences". For some schools this aspect was highlighted as being particularly important to them: "This is particularly important for us in a military community outside of the UK. We try to find examples which will help stimulate discussion about life in the UK as this can be something which our children have never experienced but face on transfer."

6.31 How resources enhance understanding

Schools were asked how they felt Espresso resources enhanced understanding. The key features that teachers highlighted were:

- Resources can be used by individual children or with the whole class.
- Resources are clearly focused on the target audience.
- All subjects are at the children's level, but are not simplistic – there is something for all abilities of children.
- They are child-friendly, easy to understand and engaging.
- Information is presented in a clear way.
- Use of media and real footage.

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- Children’s areas of knowledge are expanded - the ability to watch a video first, then move on to activities to promote deeper thinking about the subject area.
- Children can apply what they have been taught in class through games and activities.
- Children can find new things out and discuss these when looking at pictures, news, or video clips.
- Discussion is promoted.
- Resources can be seen, replayed and listened to at the child’s own pace (such as that shown in Figure 34).
- Content can be accessed when they want, and can be reviewed at will.
- By revisiting a resource (which they often do) they feel in control of their learning.
- Information is provided in a range of different ways.
- Resources provide visual examples and visual stimulus alongside activities or worksheets to accompany topics.
- Coverage of topics is very wide.
- Being able to use features that manipulate concepts such as growing, by playing at different speeds.
- Concepts are shown as dynamic processes.
- Helps those who engage through visual and auditory routes.

Figure 34: An example of an auditory resource that can be played and replayed at will



As summarised by one teacher: “Being able to see difficult concepts such as salt dissolving in liquid, or scenarios where it is difficult to replicate, e.g. watching a rocket take off, people mountain climbing etc., brings the learning to life rather than them having to just think about it. When we wrote stories after having watched the mountaineers, the adjectives were much improved as the children had seen and felt the mountains they were pretending they had just climbed.”

6.32 How externalisation of ideas is enabled

Schools were asked how they felt Espresso resources enabled the externalisation of ideas. The key features that teachers highlighted were resources acting as prompts for discussion, they could promote whole class and small group discussion, they provided prompts for writing, and they promoted questioning skills and reasoned argument. Some developing practice was highlighted by one teacher, who said: “members of staff are experimenting with ways of using Espresso with other packages so that the children can create their own voice over’s to show what they know about a topic – this is not common practice but developing practice.”

Externalisation of ideas brought about by dialogic interaction was highlighted by many teachers. As one teacher said, “Espresso resources certainly promote discussion and encourage our children to share their ideas in response to the issues or points presented in the videos”. This was taken further by another teacher who said, “absolutely, supporting speaking and discussion is huge, both. You know you watch something and then you talk about it don’t you, and you ask questions about it. The teachers may have taken a bit of a video clip out and, just a part of it and then stop it and say “What do you think going to happen next?” or “Why” and “What do you think?” You know it’s sometimes not just the resource on its own it’s the way the teacher plans to use it that has the great impact. Resources are fabulous but also the practitioner has an impact on using that resource most effectively to develop those things that you would use that we are talking about really”. Another teacher indicated how specific discussion practices were supporting a sharing of ideas: “We use talk partners to share ideas seen in videos. These are then shared with a whole class. The talk partner allows children to be able to talk in a small group first.” Another teacher indicated how different sources of ideas were encouraged to be drawn on: “Most frequently this is through discussion following the use of a resource to help children connect prior and new learning or to help them draw connections between themselves in their context and the wider world.”

6.33 How resources motivate pupils to learn

Schools were asked how they felt Espresso resources motivated pupils to learn. The key features that teachers highlighted were:

- Resources being visually engaging, making topics interesting and relevant.
- Quizzes acting as a motivator through the challenge they present (point scoring encourages competitive motivation).
- The wide range of media formats used.
- Ease of use and access (no frustration for them finding the desired resource), and help provided (the activities reward the children by cheering and clapping and ticking correct things).
- Levels of interactivity (including volunteering to contribute answers, and demonstrating understanding) and instant access.
- Brightness, and clarity and quality of presentation.
- Relevance to the child.
- Ease of searching.
- Appropriateness of learning level.
- Resources that offer manageable learning ‘bites’ (pupils can work through a sequence of ideas at their own pace when working individually at their own computers or through home access).
- The ability to operate in a safe environment.
- The activities are practical.
- Activities are short and allow pupils to redo them if they get questions wrong (quite often pupils like to redo quizzes and activities until they get all the answers correct).

As one teacher said, “Well the key thing about Espresso is that it’s easy to view things, easy to find things. We’ve talked about it [supporting] visually and [through] auditory [routes] so children who can’t read, that doesn’t make any difference to them, they can still learn. The high quality of the resources that are in there, you know they aren’t just any old pictures, the things that are in there they are really good quality. Also they’re from real life, a lot of them they go and film in lots of schools including mine, they’ve been to mine and filmed and we’re in it, in certain aspects of it. We’re there as a resource for others to use which is great”.

6.34 Whether resources are used at the beginning and end of a topic

Schools were asked whether Espresso resources were used at the beginning and at the end of a topic. Clearly different schools reported different forms of use, but, overall, it was clear that the resources could be used very flexibly. Some schools reported using resources at the beginning of a topic, during

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the topic, and at the end of a topic. Others reported that they used the resources more to introduce new information or concepts. Yet others indicated that use was dependent on teacher approaches and strategies. Some schools indicated that resources were used for revision (some with year 6 pupils specifically) as well as for introduction of ideas. Some schools indicated that they did not use the resources for assessment purposes, while others indicated that this was their main use of the resources.

Many schools emphasised uses of the resources at the beginning of a topic. As one teacher said, “These resources are usually used at the start of a period of learning – however, there are also occasions when Espresso resources are used to scaffold the learning across a unit of work”, while another said, “we try and find a resource to help launch a new topic, but not always to gauge understanding at the end.” Another teacher indicated that when resources were used: “depends on the topic and age group. I have used [them] as a starter and then at end of topic as a revision aid prior to formal assessment.”

6.35 Whether resources offer a real life context for learners

Schools were asked whether Espresso resources offered a real-life context for pupils. Of the 45 schools, 40 (the majority) indicated that they felt resources offered a real-life context for learners. The remaining teachers indicated also some level of real-life context being introduced at some times.

Teachers who felt that the resources definitely offered a real life context, made comments such as, “this gives learning a relevance that may not otherwise be evident throughout a topic”, “The pupils can see the relevance of certain areas of the curriculum because they seem more real to them”, “The children can use empathy regularly in their learning when using Espresso which helps to develop their learning”, “they can see these topics in the real world through videos!”, “[they have a] better idea of how learning links to the real world esp[ecially] Maths”, “Espresso is an excellent means by which to share different perspectives on modern life – I love the ‘Bristol is for me’ unit [see Figure 35], as it is geographically relevant, honest and a positive representation of communities”, “A big strength. Learning becomes more meaningful and those children who may ask ‘Why are we even doing this?’ (there are a few in Yr6 who would!) don’t bother. Thus, there’s a greater commitment to the task in hand. No doubt”, “This is Espresso’s real strength. They can provide the ‘WOW’ factor, resources are well matched to the key stage or group”, “I think the real life issues we’ve been using are the ones, the models of the news, the social and differentiations; we’ve used those because they are very, very good”, “Yes – multicultural too”, “especially videos of children around the world, of different areas of the world and of Britain, and of different religions - helpful as Ofsted are always pushing to extend multi-cultural awareness and social cohesion”, “The children relate it to their own life, e.g. as a school we have used the Easter videos and the children can compare around the world with their own life.”

Figure 35: A screenshot showing the 'Bristol is for me' resource

An interesting example was offered by one school: “All classes have interactive whiteboards. Also we have one in the hall. ... We use a lot of their materials for our services, for example Haiti was a classic one. I used a lot of the films and so on to explain to the children and also there was a lot of good quality stuff based on those news items that we could use in classrooms and stuff like that afterwards”.

6.36 Whether resources help with access to learning or provide benefits to those with learning needs

Schools were asked whether Espresso resources supported pupils with specific learning needs. Of the 45 schools, 40 (the majority) indicated that resources supported pupils with specific learning needs. Some schools indicated that all learners could be supported through use of the resources: “It is helpful to access literacy and numeracy resources for lower and higher age groups [see Figure 36], in order to support lower ability children and those who may be gifted”, while others identified learners with specific needs where resources had been used and had been felt to support them: “Children who find it hard to communicate their ideas verbally benefit from using some of the resources as a prompt to help them explain their learning. Others, who are particularly visual learners, find it easier to embed a concept when they have ‘seen’ what the teacher means, e.g. word building. Some children prefer to learn in isolation – although this is more uncommon – and by engaging with Espresso they can feel the learning is directed solely at them”. The provision of visual and auditory material was highlighted by some teachers as being important in this respect, and their ability to support those who engaged through kinaesthetic routes. The importance of the ability to modify resources was also highlighted as an important feature in supporting learners with specific needs: “The simplify function is excellent for children with special need and for younger learners. The speaker function in Key Stage 1 and EYFS allows children to access other curriculum areas when they may not have the reading skills to otherwise access them. Some activities such as MFL French colours can be made faster or slower depending on the learner’s ability. I have found in my experience that many EBD pupils will respond very positively to Espresso resources as the learning seems less formal.”

Figure 36: A screenshot showing easy reading material

Some teachers offered comments about specific groups or individuals who had been supported through use of the resources, “[Ethnic minority background] children find Espresso easier to access; the photos and videos allow them wider access to the curriculum”, “the sound icon in KS1 content means not being able to read does not inhibit learning”, “Anecdotal evidence in our school suggests SEN children – those with issues relating to behaviour, concentration for longer periods – respond very well to Espresso-aided teaching too”, “SEN pupils have their own individual routes saved – these routes contain activities specific to the needs of that child”, “Has been especially useful in the language unit where KS1 resources are available”, “EAL, deaf, SEN and G&T”, “This is a MLD school with about 25% pupils on Austistic Spectrum, and Espresso is useful for everyone”, “It is highly motivational for our autistic learners with the structure and bright colours”, “in particular for our deaf children as they provide a stimulating visual”, “the audio buttons ensure poor readers can still take part – this is great”.

7. A WIDER SURVEY

7.1 Evidence from the survey instrument used

It was clear from responses from some schools when completing the initial questionnaire that they experienced difficulties in finding time to do this, and accommodating this within the need to meet other priorities. There were aspects of the evaluation findings where greater quantities of information would clearly provide a more robust picture, and greater qualities of information would provide more details about aspects that at that time were unknown. In view of the need to balance these two elements, online survey instruments were produced, which were shorter than the initial questionnaire, and focused on more specific aspects. The aspects agreed, as a focus for the instruments that related to aspects of teaching and learning, were:

- Subject and topic uses of Espresso resources.
- How Espresso resources match pedagogical needs.

7.2 Format of online survey instruments

For each of these areas, a separate survey instrument was produced, and this survey instrument largely consisted of closed questions (where teachers needed to click on a response, rather than producing a written response). These instruments were made accessible via the Espresso site:

- They were offered at the same time, and teachers could choose which they completed.
- Surveys were available for a selected period of time, until a sufficiently high response rate had been gathered.

7.3 Questions for the online survey instruments

Taking account of the early evidence gathered from teachers, questions in each of the surveys (shown in Appendices D and E) were selected to gather useful further detail. The evaluation team put the survey questions into an online form, and provided URLs for testing them. The evaluation team provided web pages to explain the purpose of the surveys, how they would be used, and links from that page for teachers to access the surveys (see Appendices B and C). Espresso made schools aware of these surveys, and made them accessible through their training sessions and through their website.

7.4 Responses to the surveys

By the end of March 2011, all surveys were closed. Numbers of responses recorded in each case were:

- 135 for Survey 1 (Subject and topic uses of Espresso resources).
- 103 for Survey 2 (How Espresso resources match pedagogical needs).

Across the surveys, there was some variation in terms of year groups taught by the teachers who responded. Nevertheless, there was useful representation across the age groups for both surveys (excepting an absence of year N teachers responding in Survey 2). The numbers of teachers responding, according to year group taught, are shown in Table 8.

Table 8: Numbers of teachers according to year group taught who responded in each survey

Year group taught	Number for Survey 1	Number for Survey 2
N	1	0
R	15	10
1	19	14
2	18	16
3	18	11
4	15	9
5	16	13
6	27	16

7.5 Findings from Survey 1

Survey 1 asked teachers about their uses of Espresso, particularly with regard to topic and subject uses. Espresso, in providing resources for teachers, aims to offer resources that meet a certain number of criteria, and teachers were asked specifically whether they chose to use Espresso resources in terms of these criteria. Their responses are shown in Table 9.

Table 9: Numbers of teachers choosing to use Espresso resources according to stated criteria

Resource choice criteria	Percentage positive responses
Appealing to children of this age	82
Recognised high quality resources	70
Match subject and topic needs	62
Good presentational qualities	59
Easy to find resources I want to use	59
Up-to-date materials	50
Match how I want to use them in teaching	33

From these responses it was clear that major reasons for teachers choosing to use Espresso resources were their likely appeal to children of that age, their recognised high quality, their match to subject and topic needs, their presentational qualities, and ease of finding them. Of less importance was their match to how teachers might use them in classrooms.

Teachers were asked for which subjects they used Espresso resources. Their responses (as frequencies) are shown in Table 10.

Table 10: Subjects for which teachers use Espresso resources

Subject	Often	Sometimes	Not often	No
Numeracy	56	48	22	5
Literacy	57	54	17	4
Geography	56	63	9	1
History	61	60	5	2
RE	45	54	20	9
Science	53	67	7	1
Citizenship or PSHE	25	60	36	6
Topic work	76	43	5	5

It was clear that teachers used the resources widely. Considering the frequency of some lessons (for example, numeracy was likely to happen more often than RE lessons), resources were used in all subjects, largely ‘often’ or ‘sometimes’. Highest levels of usage overall were in topic work, history, geography and science. These levels of response paralleled those from the interview data reported in Chapter 6.

Teachers were asked whether they felt Espresso resources helped pupils in particular ways in terms of learning outcomes. Their responses (as frequencies) are shown in Table 11.

Table 11: Whether teachers feel that Espresso resources help pupils in certain ways

Learning outcome	Definitely	Some things	Maybe	Probably not	Certainly not	Overall average
Remember certain things	63	61	6	2	0	4.40
Recall certain things to mind	53	64	11	1	0	4.31
Associate to things they have experienced	50	63	18	1	0	4.23
Write	18	58	47	6	1	3.66
Produce reports (written, perhaps with images)	21	58	38	11	0	3.70
Discuss ideas or speak in class	70	51	10	1	0	4.44
Present their ideas to others	23	64	30	11	1	3.75
Draw or sketch, perhaps their ideas	11	43	57	18	0	3.36
Complete tasks or activities?	38	69	22	2	0	4.09
Engage practically or kinaesthetically	56	49	26	1	0	4.21

Interestingly, very few teachers thought that the resources did not help at all in any of these ways. Most teachers reported that they felt the resources helped pupils for sure, or in some ways. There was less certainty about the resources helping pupils to write, or to draw or sketch ideas. Using a weight factor of 5 for ‘definitely’, 4 for ‘some things’, 3 for ‘maybe’, 2 for ‘probably not’, and 1 for ‘certainly not’, an overall average could be calculated for each learning outcome. These averages are shown in the right-hand column in Table 19 above. The learning outcomes that were indicated very strongly (4.4 or above) by teachers are highlighted in red, those that are indicated strongly (4.0 and above) in orange, and those that are indicated with some strength (3.6 and above) in yellow. Others are indicated in green. These indicators were transferred to Figure 38 in Chapter 8, to update those learning areas that were considered by teachers to be learning hotspots.

7.6 Findings from Survey 2

Survey 2 asked teachers about the ways that Espresso resources matched their pedagogical needs, in terms of teaching approaches and curriculum needs. Teachers were asked whether they felt Espresso resources helped their teaching in particular ways. Their responses (as frequencies) are shown in Table 12.

Table 12: Whether teachers feel that Espresso resources help their teaching in certain ways

Learning outcome	Definitely	Sometimes	Not sure	Probably not	Certainly not	Overall average
Instruct a class on certain things	54	42	1	4	0	4.45
Explain or illustrate something	73	27	0	2	0	4.68
Direct the class about something	40	51	4	7	0	4.22
Demonstrate something	51	46	2	2	0	4.45
Set up a discussion	36	50	8	7	0	4.14
Scaffold certain ideas	24	63	6	8	1	3.99
Stimulate questioning	59	38	2	3	0	4.50
Speculate about something	36	52	9	5	0	4.17
Consolidate something that you have already covered	56	38	4	4	0	4.43
Summarise	41	46	6	9	0	4.17
Initiate or guide a topic	70	28	4	0	0	4.65
Evaluate pupils’ responses	21	46	17	12	5	3.65

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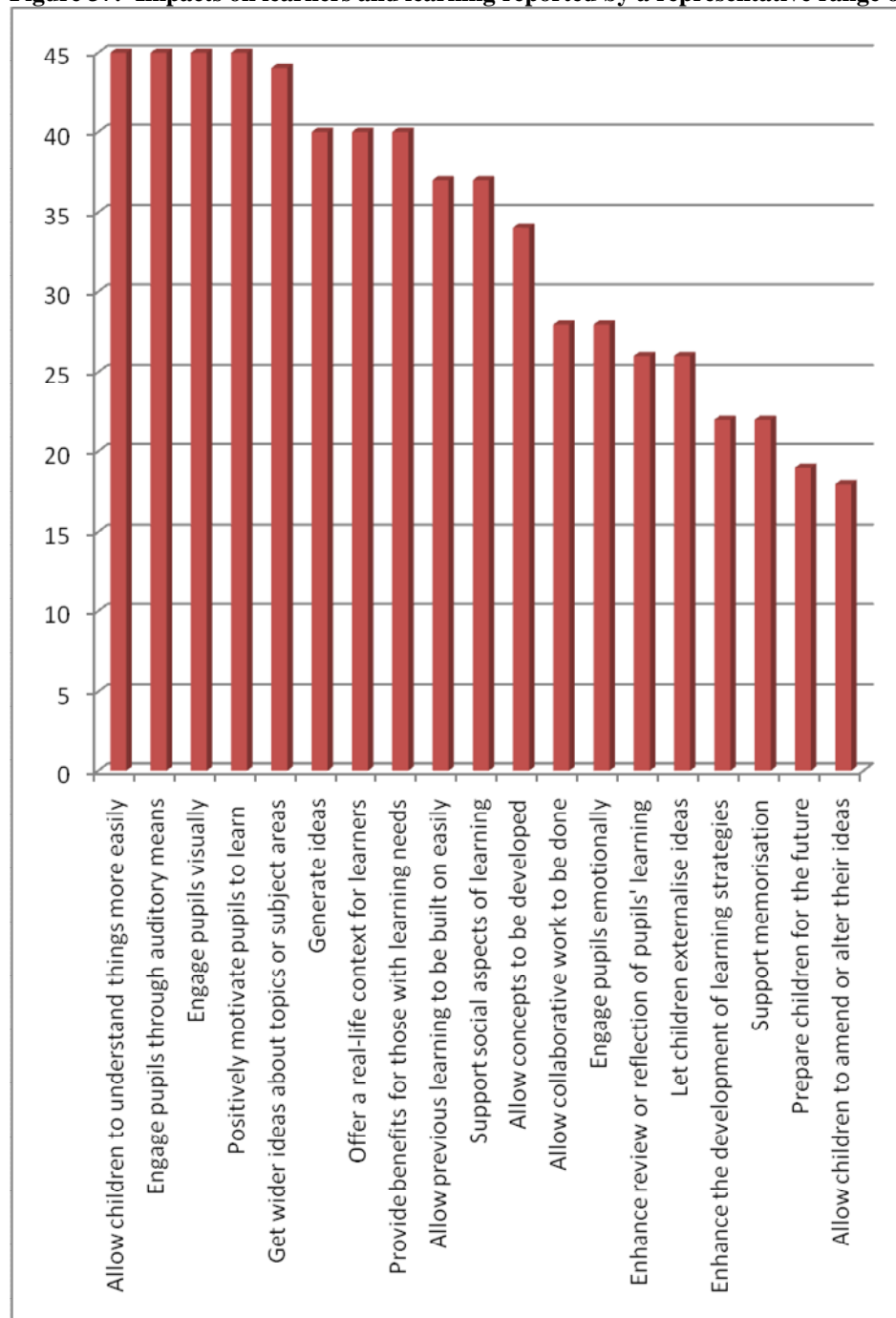
Again, very few teachers thought that the resources did not help in any of these ways. Most teachers reported that they felt the resources helped them for sure, or in some ways. There was less certainty about the resources helping them to evaluate pupils' responses. Using a weight factor of 5 for 'definitely', 4 for 'sometimes', 3 for 'not sure', 2 for 'probably not', and 1 for 'certainly not', an overall average could be calculated for each learning outcome. These averages are shown in the right-hand column in Table 12 above. The learning outcomes that were indicated very strongly (4.4 or above) by teachers are highlighted in red, those that were indicated strongly (4.0 and above) in orange, and those that were indicated with some strength (3.6 and above) in yellow. Others are indicated in green. These indicators were transferred to Figure 38 in Chapter 8, to update those learning areas that were considered by teachers to be learning hotspots.

8. ESPRESSO RESOURCES AND LEARNING HOTSPOTS

8.1 Learning hotspots identified by teacher responses

Teachers indicated that Espresso resources, used appropriately pedagogically, were impacting on learners and learning in a range of important areas. The strength of teacher responses is shown in Figure 37 below. It should be noted, however, that these levels of response cover a wide range of pedagogical approaches, and that some teachers indicated that they saw wider potential than they were at that point gaining. In some cases, therefore, these levels are dependent on teacher approaches taken, and could be higher if sampling covered those teachers using highly appropriate pedagogical approaches with their pupils for each of these aspects.

Figure 37: Impacts on learners and learning reported by a representative range of teachers (n=45)



8.2 Using a learning framework to focus on outcomes

The width of responses from teachers, and the strength of their responses, indicated that an important range of aspects of learning were impacted by use of Espresso resources. The extent of reported impacts can be identified more specifically by using a learning framework.

Interests in learning can vary, for learners, and for groups of learners. Overall, there are five categories of interest that can be identified and detailed to greater extents when exploring how and why pupils learn. These five categories all cover aspects or areas concerned with pupil motivation for learning, and are termed megacognitive, metacognitive, cognitive, social and societal. Taking each of these categories of interest in turn, it is clear that elements of each of these categories, according to reports from teachers across the schools, are supported by uses of Espresso resources. The categories themselves, which cover specific aspects of learning, are:

1. Megacognitive – this consists of those elements becoming recognised as fundamental to developing ‘expert learners’, deep learning, and wider learning, concerned with learning that goes beyond the ability to learn, that enables learners to transfer their learning both within and across subject or interest domains, involvement in real and authentic learning, such as those described in Bransford *et al.* (2000), and Vygotsky (1978).
2. Cognitive – this consists of aspects concerned with the impact of information or external stimuli on the internal mind, the forms of sensory stimuli used to engage learners, the ways in which information is handled within an existing internal information context, and the ways in which a learner can demonstrate or use the learning that has been acquired, such as those described in Bloom (1956), Child (1973), Gardner (1991) and the DfES (2006).
3. Metacognitive – this consists of aspects concerned with the ways that learners learn to learn, and elements within a learning environment to allow learning strategies to be identified, adopted, or chosen, or for information or knowledge to be transferred from one scenario or situation to another, such as those described in Presseisen (2001).
4. Social – this consists of aspects concerned with ways in which the learner interacts with others, within classroom environments as well as in home or other external environments, and the forms of interaction that allow a learner to access or use information, as well as to share it, or to work co-operatively with others, such as those described in Pask (1975), Vygotsky (1978), Lave and Wenger (1991) and Twining *et al.* (1999).
5. Societal – this consists of aspects concerned with the ways in which purposes of learning are perceived, the reason that certain information might be selected and recognised as being more fundamentally interesting or useful than other information, perhaps because it can be used within a particular societal, cultural or wider environmental context, such as those described in Lipman (1995), McFarlane (1997) and Moseley *et al.* (2005).

The reports from teachers, described in Chapters 6 and 7 above, can be analysed further, using the categorisation above, and details matching these categories can be presented in a learning framework analysis (developed by Passey, 2006; 2008).

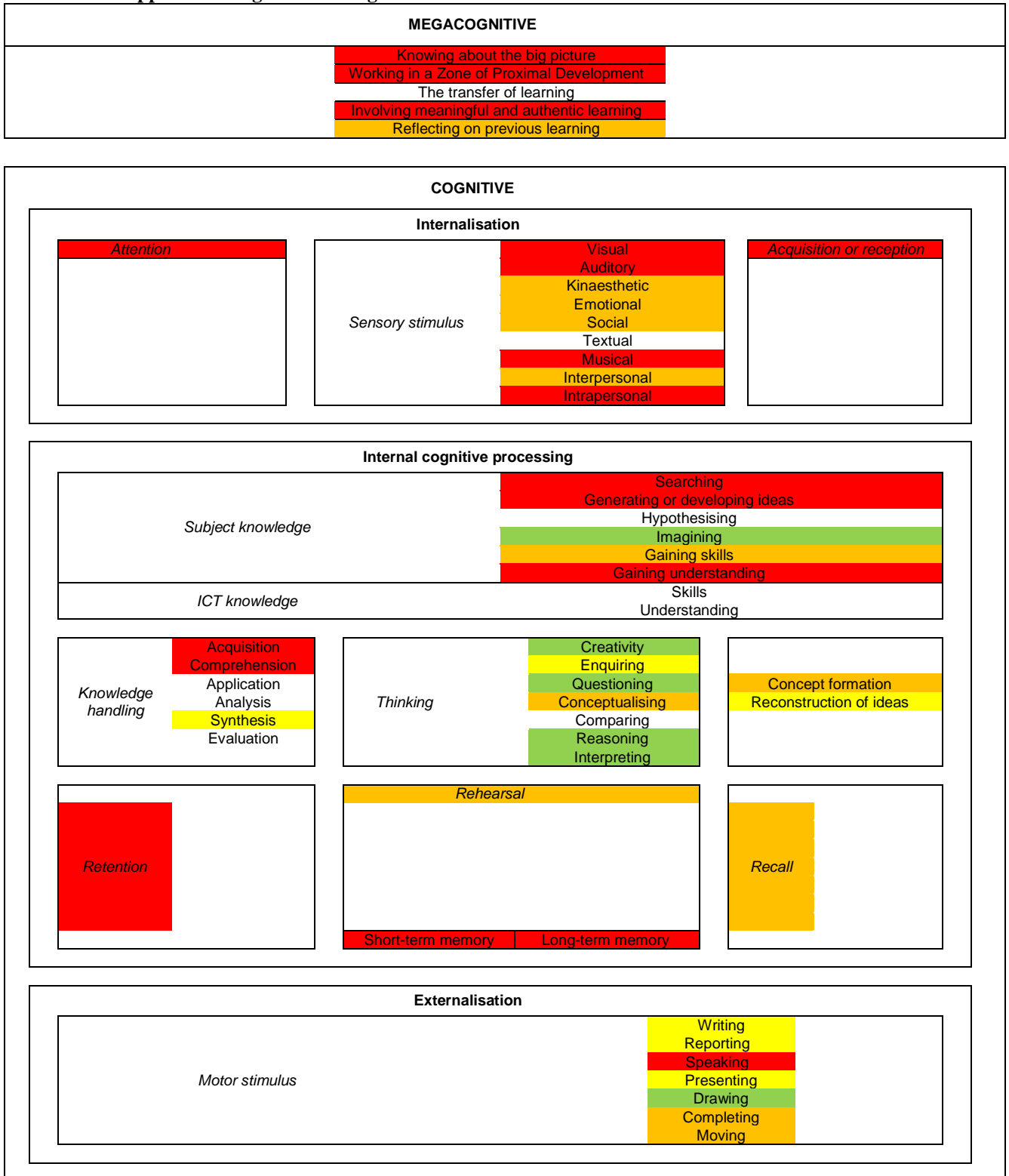
8.3 Hotspots identified through a learning framework analysis

By detailing elements of learning within each of the broad categories of interest listed in sub-section 8.1 further, it is possible to create and use a learning framework as a means to identify elements of learning where evidence indicates uses, outcomes and impacts when Espresso resources are used. A learning framework analysis is shown in Figure 38. Evidence of outcomes and impacts has been gathered from teacher responses across the range of schools involved in both the initial stage of the evaluation, and from survey responses. The level of response is shown for each relevant learning element by colour: red shows a very high level of response in the initial survey of 37 or more schools out of 45, orange a high level of 25 to 36 schools out of 45, yellow a low level of 12 to 24 schools out of 45, and cream a shallow level of 11 or less schools out of 45. Responses are also included from survey responses (in Chapter 7), where red is an average response of 4.40 or above, orange of 4.0 or

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above, yellow of 3.6 or above, and green below 3.6. Other areas are shaded green, which shows that there is evidence from schools but the level cannot be quantified through the responses provided, and white shows there is no evidence from schools from their responses.

Figure 38: Learning framework showing hotspots reported by teachers when Espresso resources are used to support learning and teaching



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METACOGNITIVE	
<i>Monitoring task performance</i>	Keeping place, sequence
	Detecting and correcting errors
<i>Selecting and understanding appropriate strategy</i>	Pacing of work
	Focusing attention on what is needed
	Relating what is known to material to be learned
	Testing the correctness of a strategy

SOCIAL		SOCIETAL	
<i>Learner interaction</i>	Instruction	<i>Caring thinking</i>	Appreciative
	Explanation and illustration		Normative
	Direction		Empathetic
	Demonstration	<i>Contextual thinking</i>	Education
	Discussion		Citizenship
	Scaffolding		
	Questioning		
	Speculation		
	Consolidation		
	Summarising		
	Initiating and guiding exploration		
	Evaluating pupils' responses		

Considering each aspect of learning, and what teachers reported about Espresso resources:

- For megacognition, there are 5 elements, 3 are reported to be impacted very commonly and 1 commonly.
- For cognition, there are 46 elements, 14 are reported to be impacted very commonly and 11 commonly.
- For metacognition, there are 6 elements, and none are reported to be impacted very commonly or commonly.
- For social, there are 12 elements, 6 are reported to be impacted very commonly and 5 commonly.
- For societal, there are 5 elements, 1 is reported to be impacted very commonly and 3 commonly.
- For all aspects, there are 74 elements, 24 are reported to be impacted very commonly and 20 commonly (44 in total).

The figure shows that certain areas of learning are being impacted particularly. It would be extremely unlikely for resources to cover and impact all the elements of learning in the same ways; this is a strong picture of impact, and clearly relates to both the qualities of the resources themselves, and the ways that teachers can use them in classrooms. It should be noted also that teachers find it much harder to judge impact that is concerned with transfers of learning or with outcomes that arise at later times, as they cannot be so certain that outcomes are associated with earlier interventions and specific uses of resources. This explains their uncertainty of reports with regard to certain aspects of thinking generation, for example, which are always difficult to associate with specific earlier causes or events.

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APPENDIX A: SCHEDULE USED TO GATHER EVIDENCE FROM SELECTED INITIAL SCHOOLS

Independent Evaluation of the Espresso online digital resources in primary schools

Information

We are sending you these questions to gather details about how you use Espresso resources in the school to support teaching and learning, and any benefits you find arises from their use. We expect these questions to take about 30 to 40 minutes to answer. We will value your responses, and it will help us a great deal if you could return your answers to us within about seven days. Please return your responses to the email used to send this schedule to you, or send to d.passey@lancaster.ac.uk.

Contact details

School: xxx

Key teacher: xxx

Contact details: [xxx](#)

Date: xxx

Please give us some basic background details

6. How many classes do you have in the school?

7. Are there any classes with mixed year groups? If so, please say which these are.

8. Are classes mixed ability?

9. Are any classes setted, banded or streamed for English, mathematics, or science? If so, please say which these are.

10. Is Espresso accessed in classrooms, or in special rooms such as an ICT suite or resource area or in both?

11. Do class teachers access Espresso through a laptop or through desktop machines?

12. Do class teachers access Espresso through interactive whiteboards in each room? If this access is not in each room, which classes have interactive whiteboards?

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Please tell us something about your overall uses of Espresso

1. Which year groups or classes use Espresso?

2. Are there some year groups or classes that use Espresso more than others? If so, which are the classes that use it most?

3. For the classes that use Espresso most, how often are Espresso resources used (is it perhaps once or more a day, once or more a week, or about every two or three weeks on average)?

4. Are certain types of resources used most regularly (perhaps news items, or resources to cover specific subject areas or specific topics)?

5. Why are these resources used more regularly than others?

6. Are Espresso resources used to support literacy or numeracy or both of these subject areas?

7. Are Espresso resources used to support cross-curricular themes? If so, which themes?

8. What sorts of benefits do teachers feel they (the teachers) gain when Espresso resources are used?

9. What sorts of benefits do teachers feel are gained by pupils when Espresso resources are used?

Please tell us something about how Espresso resources are used to support learning

Here are some ways that Espresso resources might be used to support specific aspects of learning	Do you use resources to support learning in this way?	If so, please give an example of a resource you use to do this.
1. To engage pupils visually		
2. To engage pupils through auditory means		
3. To engage pupils emotionally		
4. To allow collaborative work to be undertaken		
5. To generate ideas		
6. To allow children to understand things more easily		

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Here are some ways that Espresso resources might be used to support specific aspects of learning	Do you use resources to support learning in this way?	If so, please give an example of a resource you use to do this.
7. To allow concepts to be developed		
8. To let children externalise their ideas		
9. To support memorisation		
10. To get wider ideas about topics or subject areas		
11. To allow previous learning to be built on easily		
12. To enhance a review or reflection of a pupil's learning or learning issues		
13. To enhance the development of learning strategies		
14. To allow children to amend their ideas or to try their ideas again in other ways		
15. To positively motivate pupils to learn		
16. To support social aspects of learning (such as discussion) or social needs (such as thinking about the care of others)		
17. To prepare children more for the future (such as school transfer, or travel)		

18. If you use resources to enhance understanding, how do you think this is aided by the resources?

19. If you use resources to enhance externalisation of ideas, how is the externalisation enabled (for example, is it supporting speaking, or through discussion)?

20. If resources are used to motivate pupils to learn, how, or in what ways do you think the resources do this?

21. Do teachers use Espresso resources at the end of a topic to gauge understanding of a concept, or at the beginning and then again at the end of a concept lesson or topic, or for revision ahead of formal assessment, or in other ways?

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22. Do Espresso resources offer a real-life context to curriculum themes and concepts, and what are the consequences for learners?

23. Do Espresso resources allow access or benefits to the curriculum for learners with particular learning approaches or needs? If so, for which learners?

Please tell us how effective you think the resources are

1. Do the banks of Espresso resources help you (the teacher) in terms of time, in any ways?

2. Do you find that you can easily find an Espresso resource?

3. How long does it take you on average to find an Espresso resource?

4. How often do you not find a resource on Espresso?

5. If you used the Internet instead, from your experience, how long would it then take you to find a resource?

6. What is the rough balance between the number of Espresso resources and the number of non-Espresso digital resources that you use (half the number of Espresso resources, about the same number, or twice the number of Espresso resources, for example)?

7. Other than time, do you feel there are any other cost benefits to having Espresso resources available to you? If so, what are these?

8. Do your teachers plan the use of Espresso resources into their long term or medium term plans, or do they use resources in lessons as the needs arise?

9. When teachers come new to the school, do you find that they already know about Espresso and plan to use the resources in their lessons? If not, do you include this element in their early induction training?

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Thank you for answering our questions. The details you have given us will be collated with similar evidence from about 40 other schools. From these details we will create a report, as well as an online questionnaire that a lot more schools will be able to complete. When we are reporting evidence you have given us, your anonymity is guaranteed.

We might want to get in touch with you again, perhaps to clarify any points that we are not sure about, or perhaps to ask a few more questions, or to follow up in other ways. Are you happy that we contact you again?

If so, please delete the relevant sentence to say that you are happy for us to contact you again:

- I am happy for you to contact me again.
- I would prefer not to be contacted in the near future.
- I would prefer not to be contacted further.

If you would like to contact us for any reason, please email me at: d.passey@lancaster.ac.uk.

With many thanks,

Don Passey
Senior Research Fellow
Department of Educational Research
Lancaster University

APPENDIX B: FIRST WEBPAGE GIVING DETAILS TO SCHOOLS ABOUT THE WIDER SURVEY

[Home](#) > Introduction

Introduction

Survey Questions

Espresso

What are your experiences with the Espresso online resources?

Espresso is a company that produces a wide range of online resources to support your teaching, and to support pupil learning. We (Lancaster University) have been asked to undertake an independent evaluation of the uses of the resources, and we want to give you the chance to respond to some key questions, so that we can understand more about your experiences and how you use the Espresso online resources.

This independent research, being conducted by Lancaster University across all schools that use Espresso resources, asks you to complete one or more simple surveys.

Answers to survey questions will be used only to support the needs of the research. Taking part is entirely voluntary; all survey responses will be reported anonymously, and no electronic links are set up when you respond.

If you are one of the first 20 schools to respond, you will be sent a £25 gift voucher.

For further details, click [<Next>](#)

If you have any queries, please contact:
d.passey@lancaster.ac.uk

| [Introduction](#) | [Survey Questions](#) |

APPENDIX C: SECOND WEBPAGE GIVING DETAILS TO SCHOOLS ABOUT THE WIDER SURVEY

[Home](#) > [Survey Questions](#)

[Introduction](#)

[Survey Questions](#)

Survey Questions

The surveys allow you to tell us about different aspects of your experiences and uses of the resources. There are three short surveys that you can answer, and you can click on the links here to go straight to the surveys:

- [Survey 1: Subject and topic uses of Espresso resources \(URL TBA\)](#)
- [Survey 2: How Espresso resources match pedagogical needs \(URL TBA\)](#)
- [Survey 3: Time and management benefits \(URL TBA\)](#)

You can select and answer one, two or all of the surveys.

If you give us the name of your school in the response, this will only be used to send you a gift voucher, should you be one of the first 20 to respond. Results from all schools will be aggregated, made fully anonymous by taking school names out, and used to produce a report that will initially be presented to Espresso. Overview results may be reported more widely as research findings in journals or articles.

To access each survey, just click on the relevant item in the list above.

[| Introduction](#) | [Survey Questions](#) |

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APPENDIX D: SURVEY 1: SUBJECT AND TOPIC USES OF ESPRESSO RESOURCES

Which year group do you teach?

Why did you initially choose to use Espresso resources?	Recognised high quality resources Good presentational qualities Appealing to children of this age Match subject and topic needs Match how I want to use them in teaching Easy to find resources I want to use Up-to-date materials
--	--

How often do you use Espresso resources?	Pretty much every day	Certainly once a week on average	Perhaps every couple of weeks	Certainly once a month	Less than once a month on average
How often do you use digital resources that are not Espresso?	Pretty much every day	Certainly once a week on average	Perhaps every couple of weeks	Certainly once a month	Less than once a month on average

Which digital resources other than Espresso resources do you use?	Other commercially purchased sets Sets that are freely accessible Ad hoc Internet-based resources
--	---

Do you use Espresso resources for numeracy?	Often	Sometimes	Not often	No
Do you use Espresso resources for literacy?	Often	Sometimes	Not often	No
Do you use Espresso resources for geography?	Often	Sometimes	Not often	No
Do you use Espresso resources for history?	Often	Sometimes	Not often	No
Do you use Espresso resources for RE?	Often	Sometimes	Not often	No
Do you use Espresso resources for science?	Often	Sometimes	Not often	No
Do you use Espresso resources for citizenship or PSHE?	Often	Sometimes	Not often	No
Do you use Espresso resources for topic work?	Often	Sometimes	Not often	No

Do you think Espresso resources help pupils to remember certain things?	Definitely	Some things	Maybe	Probably not	Certainly not
Do you think Espresso resources help pupils to recall certain things to mind?	Definitely	Some things	Maybe	Probably not	Certainly not
Do you think Espresso resources help pupils to associate to things they have experienced?	Definitely	Some things	Maybe	Probably not	Certainly not
Do you think Espresso resources help pupils to write?	Definitely	Some things	Maybe	Probably not	Certainly not
Do you think Espresso resources help pupils to produce reports (written, perhaps with images)?	Definitely	Some things	Maybe	Probably not	Certainly not
Do you think Espresso resources help pupils to discuss ideas or speak in class?	Definitely	Some things	Maybe	Probably not	Certainly not
Do you think Espresso resources help pupils to present their ideas to others?	Definitely	Some things	Maybe	Probably not	Certainly not
Do you think Espresso resources help pupils to draw or sketch, perhaps their ideas?	Definitely	Some things	Maybe	Probably not	Certainly not
Do you think Espresso resources help pupils to complete tasks or activities?	Definitely	Some things	Maybe	Probably not	Certainly not
Do you think Espresso resources help pupils to engage practically or kinaesthetically?	Definitely	Some things	Maybe	Probably not	Certainly not

What are the things that other digital resources provide that Espresso resources do not? Please state them here.

APPENDIX E: SURVEY 2: HOW ESPRESSO RESOURCES MATCH PEDAGOGICAL NEEDS

Which year group do you teach?

Do you find that Espresso resources help your teaching when you need to instruct a class on certain things?	Definitely	Sometimes	Not sure	Probably not	Certainly not
Do you find that Espresso resources help your teaching when you need to explain or illustrate something?	Definitely	Sometimes	Not sure	Probably not	Certainly not
Do you find that Espresso resources help your teaching when you need to direct the class about something?	Definitely	Sometimes	Not sure	Probably not	Certainly not
Do you find that Espresso resources help your teaching when you need to demonstrate something?	Definitely	Sometimes	Not sure	Probably not	Certainly not
Do you find that Espresso resources help your teaching when you want to set up a discussion?	Definitely	Sometimes	Not sure	Probably not	Certainly not
Do you find that Espresso resources help your teaching when you need to scaffold certain ideas?	Definitely	Sometimes	Not sure	Probably not	Certainly not
Do you find that Espresso resources help your teaching when you want to stimulate questioning?	Definitely	Sometimes	Not sure	Probably not	Certainly not
Do you find that Espresso resources help your teaching when you want pupils to speculate about something?	Definitely	Sometimes	Not sure	Probably not	Certainly not
Do you find that Espresso resources help your teaching when you want to consolidate something that you have already covered?	Definitely	Sometimes	Not sure	Probably not	Certainly not
Do you find that Espresso resources help your teaching when you want to summarise?	Definitely	Sometimes	Not sure	Probably not	Certainly not
Do you find that Espresso resources help your teaching when you want to initiate or guide a topic?	Definitely	Sometimes	Not sure	Probably not	Certainly not
Do you find that Espresso resources help your teaching when you want to evaluate pupils' responses?	Definitely	Sometimes	Not sure	Probably not	Certainly not

What are the things that other digital resources provide that Espresso resources do not? Please state them here.

About the author

Dr Don Passey is a Senior Research Fellow in the Department of Educational Research at Lancaster University. He has wide experience with developing and using evaluation and research methods to look at technological innovation, and has studied and reported on outcomes of implementation and uses of leading edge technologies and their impacts on learning for over 20 years. His work has focused particularly in areas exploring implementation, management and uses of leading edge technologies for primary and secondary age pupils and teachers, in informal as well as formal learning settings, but he has undertaken studies in further education settings also. Increasingly, his focus has been on how technologies support groups of young people who find it hard to learn. His research is based strongly in grounded theory approaches, adopting integration and sequencing of appropriate ranges of qualitative and quantitative (covering wide ranges of size sampling) methods, and he has developed new analytical techniques to explore impacts of technologies on learning, which include the use of learning frameworks and gap analysis.

He has led and undertaken more than 50 research and evaluation studies over the past 10 years, the vast majority independently commissioned to support aspects of policy or practice. He has recently completed a study for Wolverhampton Local Authority (LA) on the implementation of the LP+ learning platform, is undertaking a range of studies on home access and uses of technologies to support young people's learning, has undertaken an evaluation study for the BBC looking at outcomes of the BBC News School Report project, and a number of studies for Becta looking at potential uses of technologies with young people who are not in employment, education or training (NEET). He has over the past few years undertaken a series of evaluation studies on how schools in Aston Pride have supported the development of community and home access to ICT, as well as a review of the ICT development practices and outcomes arising in Wolverhampton LA. He was commissioned by the BBC to look at learning uses and outcomes of the BBC jam resources at an early stage of their development. He previously completed studies on the role and learning benefits of IT Academies for the DfES, the use of broadcast video clips in schools and uses of multimedia support for at risk young people for the BBC, the uses of specific online learning resources for regional broadband consortia (RBCs), the ways in which ICT is linked to pupil motivation for the DfES, the role of ICT in supporting learning practices for disadvantaged communities for a NDFC project, the outcomes of uses of interactive whiteboards, and the development of e-learning practices across RBCs and local authorities (LAs). Earlier studies reported on the outcomes and implementation of Pathfinder LEAs for the DfES, the development of Year 7 online course materials for mathematics for RM, the use of a number of integrated learning systems in schools, he led a team that investigated the outcomes of laptop use in schools and homes as part of the Microsoft UK Supported Anytime, Anywhere Learning Project, and led a study for the Qualifications and Curriculum Authority (QCA) looking at the implications of uses of ICT for coursework in examination assessment.

He has worked with EU and government agencies, commercial and non-commercial groups, educational institutions and schools, in undertaking research to inform both policy and practice. He was a consultant to a previous department for education on a number of projects, which included work on the development of innovative approaches to data management systems in schools and LAs. He has worked with commercial companies in the UK, Switzerland and Germany, with state pedagogical research institutions in France, Spain and Germany, with educational groups in Hong Kong, Bermuda, and Peru, with LAs across England and Scotland, with RBCs, and with individual schools. He established, in collaboration with SSAT, a Masters in Research course in Innovation in School Practice for teacher practitioners, focusing on researching the uses of data and technologies within schools and in homes.

He is vice-chair of the International Federation for Information Processing Working Group on Information Technology in Educational Management, a member of an international Working Group on Elementary Education and ICT, and a member of the BCS Schools Expert Panel. He has written widely on aspects of leading edge ICT uses in primary and secondary education.

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