What did you learn at the museum today? Second study

Evaluation of the outcomes and impact of learning through the implementation of the Education Programme Delivery Plan across nine Regional Hubs (2005)

CONTENTS:

CONTENTS IN DETAIL

SECTION SIX: TEACHERS' VIEWS OF THE IMPACT OF THE MUSEUM VISIT ON THEIR PUPILS

SECTION SEVEN: PUPILS' VIEWS ON THE IMPACT OF THE MUSEUM VISIT ON THEIR LEARNING

SECTION EIGHT: THE IMPACT OF RENAISSANCE FUNDING IN REGIONAL MUSEUMS

SECTION NINE: THE RESEARCH FINDINGS

LIST OF FIGURES AND TABLES

SECTION FOUR: TEACHERS' USE OF MUSEUMS

SECTION FIVE: THE VALUE OF MUSEUMS TO TEACHERS

SECTION SIX: TEACHERS' VIEWS OF THE IMPACT OF THE MUSEUM VISIT ON THEIR PUPILS

SECTION SEVEN: PUPILS' VIEWS ON THE IMPACT OF THE MUSEUM VISIT ON THEIR LEARNING

SECTION EIGHT: THE IMPACT OF RENAISSANCE FUNDING IN REGIONAL MUSEUMS

APPENDICES

KEY FINDINGS

A. Museums and schools

A1. Numbers of contacts with school-aged children in the 69 museums have increased by 40% (47% Phase 1 museums, 29% Phase 2 museums).

A2. There are considerable variations in the uplift achieved by each museum service, but as a whole these are remarkable figures, showing that across England, museums are making successful efforts to increase their value to schools and families.

A3. The vast bulk of school visits are made by primary schools, which represent 81% of the total.

A4. Secondary schools make up about 10% of school visits.

A5. The impressive increase of 40% in relation to pupil contacts includes a disproportionate percentage of schools located in areas with high levels of deprivation, where children may be at risk of social exclusion. Evidence of this capacity of museums, to work with schools where deprivation may be experienced by children, is strong and consistent.

A6. Using the IMD 2004 from the Neighbourhood Renewal Unit, 19% of recorded single visits came from SOAs classified as being amongst the 10% most deprived in England, and 32% of the visits were made by schools located in the 20% most deprived SOAs in England.

A7. An analysis of schools in relation to percentages of pupils entitled to free school meals shows that 38% of schools using the 69 museums in this study are located in the highest quartile, where the 25% of schools in England with the highest levels of free school meal entitlement are to be found. The evidence from both these analyses and the finding from the 2003 study are consistent.

A8. These museums are also working with disproportionately high numbers of special schools, which make up 5% of all schools in England, but 12% of the schools visiting these 69 museums.

A9. The numbers of primary and secondary schools using museums closely match the distribution of primary and secondary schools in England.

What amazed me most on my visit was... *I enjoyed the story about Boudica*

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Kirrika aged 11 chose to draw a lively illustration of Boudicca (Boadicea) based on a story she had heard during her visit to Colchester Castle

B. Teachers' views about museums:

B1. A total of 1,643 teachers completed Form A (782 teachers Phase 1 museums, 861 teachers Phase 2 museums).

B.2 Teachers remain highly enthusiastic about museums, are very satisfied with what they find in museums and very confident about using them in the future.

B3. Teachers are more focused on outcomes than in 2003, and think about learning outcomes differently according to their purposes in using museums.

B4. Teachers at Key Stage 2 and below value museum-based learning outcomes more highly than teachers of older pupils.

B5. Teachers have increased their use of museums for cross-curricular work considerably since 2003, with 27% of teachers working in this way in 2005 compared to 4% in 2003.

B6. 64% of teachers reported using museum on-line resources, and 40% borrowing objects and handling material in addition to visiting museums.

B7. Primary teachers use museums most, but those secondary teachers using museums do so consistently.

B8. Most, but not all, teachers use museums flexibly and imaginatively, taking advantage of government encouragement to promote creativity.

B9. A very large percentage of all teachers use these 69 museums for historical work. Most of the cross-curricular work is History-based.

B10. There are fewer teachers using museums for Art and Design than in 2003, possibly because of the selection of the 69 museums which may not include a large number of art galleries.

B11. Teachers do not always find using museums easy as taking pupils out of school can be problematic, and some elements of museum culture are unwelcoming.

C. Pupils' views about museums:

C1. Form B, the pupils' questionnaires, were completed by 26,791 pupils.

C.2 Pupils remain extremely enthusiastic and confident about their learning even where their teachers do not think learning has occurred.

C3. Pupils are more enthusiastic where all or most of the critical success factors for successful visits are in place.

C4. Some pupils can obtain higher levels for their assignments following a museum visit.

C5. Ten percent (10%) more older pupils found museums made school work more inspiring than in 2003.

C6. Pupils and teachers value highly the emotional engagement that museums enable – this stimulates the attainment of Knowledge and Understanding and also the development of Attitudes and Values.

C7. Many pupils progressed considerably in their understanding after museum visits because of concrete experiences that make facts 'real'.

C8. Most pupils are able to personalise their learning through their individual responses to collective group events; this leads to ownership of the experience and, from this, Knowledge and Understanding, Attitudes and Values. Through this ownership, progression occurs.

D. Phase 1 and Phase 2 museums:

D1. Taking the Phase 1 and the Phase 2 museums as a whole, there were very few significant differences between them.

D2. Phase 1 museums in this study consisted of 100% of the three Phase 1 Hub museums.

D3. Phase 2 museums consisted of a sample of 17% of the museums in the six Phase 2 Hubs.

D4. Phase 2 museums were selected because of high levels of educational use.

E. Phase 1 museums:

E1. Secondary schools make up 3% more of the school audience in the Phase 1 museums (12%) than in the Phase 2 museums (9%).

E2. 69% of teachers visiting the Phase 1 museums are using on-line resources compared to 64% of teachers visiting Phase 2 museums.

E3. There are fewer teachers on first time visits than in the Phase 2 museums (40% compared to 49%).

E4. Teachers are less likely to be linking their work at the museum to the curriculum.

E5. Teachers are more likely to value Action, Behaviour, Progression.

F. Phase 2 museums:

F1. Older pupils were more enthusiastic about museums.

F2. Higher proportions of teachers are on their first visit (49% compared to 40%).

F3. Teachers are more likely to be doing curriculum-related work.

G. The Generic Learning Outcomes approach:

G1. The GLOs were used to shape this research study and its analysis.

G2. The GLOs proved effective in encompassing, describing and analysing all dimensions of the evidence of learning generated by the research methods.

G3. While each individual GLO can be identified for the purposes of research and analysis, they are closely interwoven in practice.

G4. Teachers are much more attuned to an outcome-based approach to learning than they were in 2003.

H. How museums contribute to government agendas:

H1. Museums promote creativity and this could be further exploited by schools.

H2. Museums can help in the development of personalised learning.

H3. Museum school services play a powerful role in delivering *Every Child Matters.*
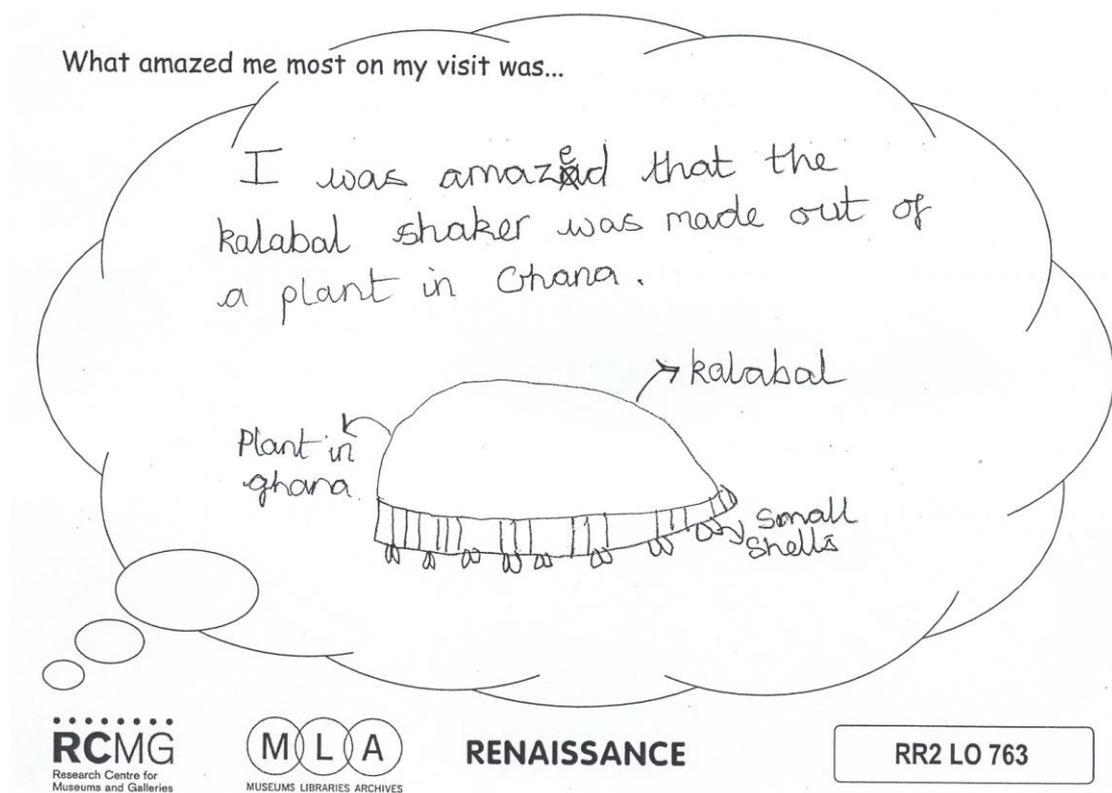
Sona, aged 9, enjoyed finding out about the kalabal shaker at the Hornima

EXECUTIVE SUMMARY

1. Scope and background to the research

1.1 This report was commissioned from the Research Centre for Museums and Galleries (RCMG) in the Department of Museum Studies at the University of Leicester by MLA. The purpose of the report was to explore the impact of Renaissance funding for museum education, looking specifically at the impact on learning following school visits to museums.

1.2 The Generic Learning Outcome (GLO) approach has been used to measure pupils' learning following a museum visit.

1.3 This study grows out of and extends an earlier study in 2003 that concentrated on 36 museums in the Phase 1 museum Hubs. This research has revisited the Phase 1 museums, and also encompassed museums in the Phase 2 Hubs.

1.4 This research involved 69 museums in the nine regional Hubs; 1,643 teachers responded to a questionnaire, and a further 31 teachers were interviewed in focus groups and schools; 26,791 pupils completed another questionnaire, 82% of these (21,845) at KS2 or below and 18% (4,946) at KS3 and above, and a further 29 pupils were interviewed in school case-studies. This can be compared with 936 teachers and 20,604 pupils in 2003.

1.5 The sample size for this study is considerably larger than for the 2003 study, but exhibits many of the same characteristics. The findings from the research confirm, reinforce and deepen the findings from the earlier study. Many of the findings are very much the same as in 2003, but in some instances there are small shifts in emphasis. There are very few large changes since 2003.

2. Uplift in numbers using museums

2.1 The numbers of school-aged children using museums has increased by 40% from 2003-2005 overall.

2.2 The Phase 2 museums have increased their contacts with school-aged children by 29% since 2003.

2.3 The Phase 1 museums have increased their contacts with school-aged children by 47% since 2003.

3. Museums are serving schools in deprived areas and high numbers of special schools

3.1 The postcode and free school meal data from this study shows that museums are working with disproportionately large numbers of schools serving children from socially deprived circumstances.

3.2 19% of recorded single visits came from Super Output Areas classified as being amongst the 10% most deprived in England.

3.3 32% of the visits were made by schools located in the 20% most deprived SOAs in England.

3.4 Special schools figure much more highly in the museum sample (at 12%) than they do in the national figures (5%), reflecting a very high level of use by schools in this category.

4 Teachers' use of museums

4.1 43% of all teachers were on their first visit to the museum, with a higher proportion on their first visit in the Phase 2 museums (49%) compared to the Phase 1 museums (40%).

4.2 During the last two years:

- 86% of teachers in this study visited a museum
- 64% used on-line resources
- 40% borrowed an object or handling box

5. Using the museum for curriculum-related work

5.1 90% of teachers agreed that the work at the museum today was linked to the curriculum, compared with 94% in 2003, with 3% more teachers working in this way in the Phase 1 museums than in the Phase 2 museums.

5.2 More primary teachers linked their visit directly to the curriculum, 94% compared to 87% of secondary teachers.

5.3 27% of teachers were working in an interdisciplinary manner. 51% of teachers are working on History-related themes; this compares with 70% in 2003.

5.4 11% percent of the teachers were working on Art and Design, compared with 15% in 2003 (and this may be related to the change in the museums surveyed).

6. The value of the five Generic Learning Outcomes to teachers

6.1 The percentages of teachers saying that the learning outcomes that could result from using museums were 'important' or 'very important' are very high:

- Increase or change in Knowledge and Understanding   95%
- Enjoyment, Inspiration, Creativity   94%
- Change or development in Attitudes and Values   92%
- Increase in Skills   89%
- Action, Behaviour, Progression   81%

6.2 Compared with 2003, teachers rate Attitudes and Values slightly more important (by 4%) than in 2003, and Enjoyment, Inspiration, Creativity slightly less important (by 3%).

6.3 Primary teachers were much more likely to rate the GLOs highly than secondary teachers.

6.4 Teachers using museums for curriculum-related purposes are much more likely to say that museums are very important to their teaching.

6.5 Two key elements in the value of museums to teaching are that museums provide something that the classroom can not, and that the quality of the provision is reliably and consistently high.

7. The achievement of specific learning outcomes

7.1 Teachers think that museums can be a very powerful teaching tool for all pupils regardless of socio-cultural or ability background.

- 99% of teachers thought it 'likely' or 'very likely' that their pupils would have enjoyed the museum visit, with 88% ticking 'very likely'
- 95% thought new interests would be aroused and pupils would be inspired to learn more
- 93% thought pupils would be excited by new ways to learn
- 88% of teachers expected to be exploring new ideas with their pupils as an outcome of the museum visit.

7.2 Teachers are explicit about the causal link between enjoyment and learning:

- 'Enjoyment opens children up to learning'
- 'Enjoyment leads to a heightened sense of awareness'

7.3 Knowledge and Understanding remain of key importance to teachers:

- 95% of teachers think it is 'likely' or 'very likely' that their pupils would have gained in subject-specific facts

- 92% think pupils will feel more positive about learning as an outcome of their museum visit
- 94% of teachers thought pupils would increase in subject-related understanding.

7.4 Teachers understand progression as something that would happen in the middle to long term, and some are more uncertain about what could be identified in the short-term, immediately following a museum visit. Even so:

- 78% of teachers think it 'likely' or 'very likely' they will be undertaking new activities with their pupils following the museum visit
- 78% of teachers think it 'likely' or 'very likely' their pupils will be using new skills
- 68% of teachers think it 'likely' or 'very likely' their pupils will work with their peers in new ways
- 61% of teachers think it 'likely' or 'very likely' they will be working in other new ways in the classroom.

7.5 In relation to Skills:

- 92% of teachers anticipating an increase in thinking skills
- 87% of teachers expected an improvement in communication skills
- 86% expecting an improvement in social skills.

8. Teachers' attitudes and purposes

8.1 In considering how teachers value museums and the learning that may result from their use, it is vital to differentiate between primary and secondary teachers, and between the purposes for which those teachers are using museums.

8.2 Teachers in 2005 appeared more reflective about the types of learning their pupils experienced during a museum visit, and were able to analyse and examine this more effectively than during the 2003.

8.3 Some teachers were more focused on the impact of the museum on their students in relation to issues around ethnicity, socio-economic deprivation, cultural entitlement, aspiration, class mobility and inclusion than in 2003.

8.4 It is likely that government policies and strategies, especially the focus on outcomes and the drive to inclusiveness, may have influenced the ways teachers think about and use museums

9. Teachers are satisfied and confident in using museums, but face substantial difficulties in making visits

9.1 Very large percentages of teachers (74%) across all museums are 'very satisfied' and a further 22% are 'satisfied' with their museum experiences.

- 96% of teachers are satisfied or very satisfied
- 90% of teachers agreed that their confidence in using museums had increased

9.2 Some important issues were raised about the difficulties teachers face in visiting museums with their classes. These include issues that museums can address, including those to do with visit administration and museum facilities for schools, and those that museums can do little about, such as school-based administration, high costs of transport, attitudes of the general public to pupils and problems of cover when teachers are out of school.

10. The importance of museums to teachers

10.1 The importance of museums to teachers seems to have changed a little since 2003.

- 95% of teachers stated that museums were 'important' (49%) or 'very important' (46%) for their teaching, which was much the same as in 2003
- But the percentage stating 'very important' has fallen from 58% to 46%.

10.2 This is a puzzling finding, which is contradicted by all the other evidence in the research study. Probing for possible reasons for this, it was found that whether or not the work at the museum was linked to the curriculum was a major factor.

- 48% of teachers whose work was linked to the curriculum rated museums 'very important' for their teaching, compared with 33% of those whose work was not so linked.

10.3 As the percentage of teachers using museums for curriculum-related work has dropped since 2003, this may account for an apparent drop in the importance of museums in teachers' eyes.

11. Pupils' views of their own learning

11.1 Pupils are, as in 2003, both very enthusiastic about their museum experiences, and confident about their own learning.

11.2 Bearing in mind that approximately one third of the schools in which these pupils are based are located in areas of considerable deprivation, and 12% of the schools are special schools, the positive response from pupils is extremely impressive. This is strong evidence that museums have the

potential to be effective in working towards social inclusion and in working with children at risk.

11.3 At KS2 and below:

- 93% enjoyed today's visit
- 90% learnt some interesting new things
- 80% could understand what they did
- 86% thought museums were exciting places.

11.4 At KS3 and above:

- 86% enjoyed today's visit
- 85% discovered some interesting things
- 83% thought museums were good places to learn in a different way to school
- 71% said the visit had given them a better understanding of the subject
- 68% said the museum/gallery visit makes school work more inspiring

11.5 The pupils' responses were very much the same as in 2003, except for two significant differences; older pupils seem to be much more enthusiastic about the inspirational impact of museums (up from 58% to 69%) and also about potential for skills learning (up from 62% to 68%).

12. The impact of Renaissance funding in regional museums

12.1 Renaissance has had a very strong impact on museums and education.

12.2 Staff numbers have increased by almost 50% (46%) in the last two years (2003-2005).

12.3 Contacts between museums and school-aged children has increased by 40%.

12.4 Museums and schools are developing more integrated ways of working together, and teachers now have a much better understanding of what museums can offer.

12.5 Support for teachers has improved through museum education websites, advisory services for teachers, and a greater awareness on the part of museum staff of teaching and learning.

13. Museums and government agendas

13.1 Museums promote creativity and this could be further exploited

13.1.1 Museums are already seen by teachers and by pupils, as places where creativity can flourish, where new ideas are generated and where experiences can be inspirational. This could be built upon.

13.1.2 Some of the most creative work is interdisciplinary. The use of museums for cross-curricular work has increased tremendously since 2003 but this is mainly by primary teachers on historical themes. Museums have a much wider cross-curricular potential than this. Museums displays are thematic and cross-curricular and objects are inherently interdisciplinary.

13.1.3 Museums can enable teachers to broaden their range of teaching styles and develop further their disposition and pedagogy for creativity.

13.1.4 This study shows how, using museum displays and collections, children can make connections and see relationships, reflect critically, and understand how their ideas and feelings have changed during the museum visit.

13.2 How museums can help in the development of personalised learning

13.2.1 One of the key findings of this research study is the very high level of enjoyment and inspiration that pupils of all ages experience in museums:

- 68% of pupils at KS3 and above find museums inspiring (an increase of 10% in two years)
- 86% of pupils at KS2 and below thought museums were exciting places.

13.2.2 The most important outcome for teachers, and the one they most expect to find in their pupils, is enjoyment:

- 99% of teachers thought their pupils would have enjoyed the museum visit
- 95 % teachers thought new interests would be aroused
- 95% thought their pupils would be inspired to learn more.

13.2.3 Enjoyment and enthusiasm stems from being able to make an individual emotional investment in a museum experience which results in a personalised response to a collective event.

13.2.4 Personalised responses arise from:

- Active making of meaning and taking ownership of learning
- The use of prior knowledge to make events meaningful and significant in an individual way
- Making links with family circumstances or histories
- Use of preferred learning styles

- Aesthetic responses to specific objects or buildings
- The building of confidence in individual capacity to understand and perform
- Stronger relationships between individual pupils and their peers as the result of shared experience.

'Being in the conditions that there were at that time, you actually felt emotions that they would be feeling at the time and it's easier to understand how things were if you're actually doing it and seeing...'

A KS2 pupil is impressed by a visit to Blakesley Hall, a 16th century timber-framed house and part of Birmingham Museums and Art Gallery

The most interesting thing about today was...

Seeing the country side and realising how easy it would be to loose it. Also how many rare animals Norfolk has. and we must preserve what we have and not loose Something that is precious and fragie to mankind.

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M L A
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RENAISSANCE

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Will aged 13 became more aware of and sympathetic to his environment after a visit to Roots of Norfolk at Gressenhall

13.3 The contribution of museums to *Every Child Matters*

13.3.1 *Every Child Matters* is working towards ensuring that every child has the chance to fulfil their educational potential, through encouraging high educational standards and a wider concept of well-being. *What did you learn at the museum today? Second study 2005* provides strong evidence of how museums are able to contribute to enabling all children to succeed.

13.3.2 Museums provide high quality, creative and cultural learning opportunities. The tangibility of the experience and the opportunity to access information and feelings through the senses, combined with the possibility of individual emotional engagement, makes the museum a powerful teaching tool.

13.3.3 *Every Child Matters* understands that organisations must broaden opportunities for all children to reach their individual potential. Museums can be very effective at this, particularly with older pupils who are often surprised to find how inspiring museums can be.

Stacey, aged 15, wrote after a visit to Manchester Art Gallery:

'[The most interesting thing about today was…] Taking photographs and making pictures from tape, it was using a new method to express creativity. The whole trip was inspirational.'

13.3.4 The use of objects and of learning in a rich and tangible environment, while providing enjoyable, effective, and stimulating pathways to learning for all children, has long been acknowledged as especially valuable for pupils with special needs and for those who find learning difficult.

13.3.5 Museums have a strong contribution to make in relation to learning in Special schools, which are very much over-represented as museum users in relation to their distribution in England. Where special schools make up 5% of all schools in England, they made up 12% of the schools using the 69 museums in September and October 2005.

13.3.6 Museum school services are significant players in working towards social inclusion. Of school visits to these museums, 32% are located in the 20% most deprived areas (SOAs) in England.

13.3.7 Considering the actual schools visiting museums in relation to the percentages of pupils eligible for free school meals, these museums are working across schools with pupils from all social backgrounds, but 38% of these visits are made by schools where more than 25% of the pupils are eligible for free school meals.

13.3.8 Museums are already making a strong contribution to inclusiveness in educational provision. With the new emphasis on education outside the classroom, this contribution can be extended.

14. Final conclusions

14.1 Museums are providing increased services that are highly valued by teachers, and are contributing powerfully to government agendas.

14.2 Renaissance funding has enabled increased provision for schools which on the whole remains of high quality. Contact numbers with school-aged children have increased by 40% in two years. Although museums are used by schools across the social spectrum, disproportionately large numbers of pupils at risk of deprivation and with special educational needs are being reached by museums. Teachers from all types of school are convinced of the value of museums for their pupils' learning. Satisfaction levels of teachers remain very high, though it is not always easy for them to take pupils out of school and in some cases more could be done by museums to help. Pupils are very enthusiastic and more could be done by teachers to follow up on museum-based learning.

14.3 This research shows clearly the enormous potential of museums to successfully generate the full range of learning outcomes; however, there is still a great deal more that could be done by museums, given the resources.

What amazed me most on my visit was...

What amazed me was that most of these ~~thing~~ atrefacts are old and you have managed to keep them safe for us to come and see. I have drown some roman coins wich I found. quite amazing.

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RENAISSANCE

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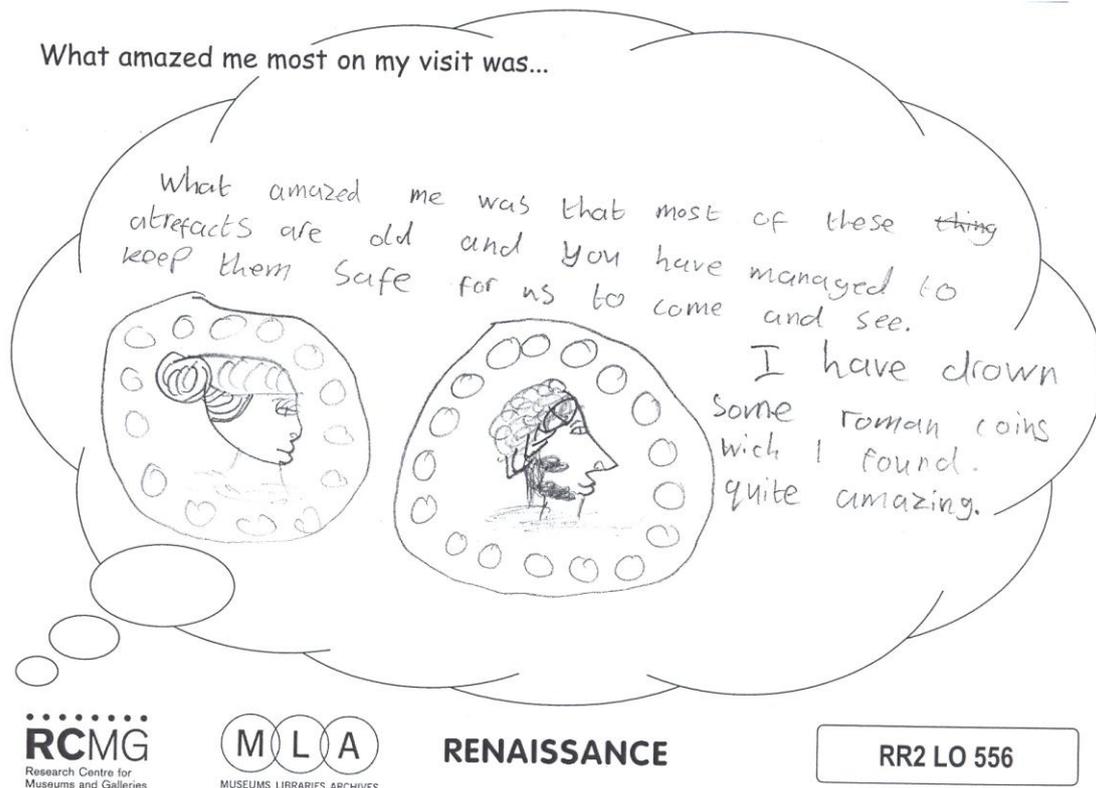
Iqra aged 8 was impressed by the fact that the museum existed in order to keep 'things safe' so that people like her could visit and look at them. She also drew a careful picture of two coins she saw during her visit to the Museum of London

SECTION ONE

CONTEXT AND AIMS OF THE RESEARCH

1.0 Introduction

Government cultural policy has emphasised the educational potential of museums since 1999, and recent developments in government's educational strategies offer many opportunities for museums. The Renaissance in the Regions programme, which provides central government funding to museums in the English regions, establishes the development of museum school services and community work as a targeted outcome, in addition to other priorities. A research study, *What did you learn at the museum today?*, carried out by the Research Centre for Museums and Galleries (RCMG), Department of Museum Studies, University of Leicester[1] in 2003/4 explored what the 36 museums in the Phase 1 Hubs had achieved in relation to these outcomes and targets. A second study has now been commissioned which repeats and extends this first study. This is the report of the second study in 2005.

1.1 Government policies and museum education

Government cultural policy has maintained a focus on museums and education in a consistent and coherent manner since the publication of *A new cultural framework* in 1998.[2] DCMS and DfEE[3] stated in 2000 that: 'The Government believes that education is central to the role of museums today',[4] and a range of funding streams have been established to develop the educational potential of museums.[5] Many museums in England have taken advantage of these funding opportunities (such as the Museums and Galleries Education Programme 1 and 2, and the DCMS Strategic Commissioning Museum Education Programme) and as a result the educational capacity and experience of museums has grown. The Renaissance programme emphasises the development of the educational potential of museums and galleries among its eight

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[1] http://www.le.ac.uk/museumstudies
[2] Department for Culture, Media and Sport, 1998, *A new cultural framework*, DCMS, London; see also Department for Culture, Media and Sport, 2000. *Centres for social change: museums, galleries and archives for all: policy guidance on social inclusion for DCMS funded and local authority museums, galleries and archives in England*, DCMS, London; Department for Culture, Media and Sport, 2001, *Libraries, museums, galleries and archives for all: co-operating across the sectors to tackle social exclusion*, DCMS, London.
[3] The Department for Education and Employment (DfEE), which through a later restructure became the Department for Education and Skills (DfES).
[4] Department for Culture, Media and Sport and Department for Education and Employment, 2000, *The learning power of museums: a vision for museum education*, DCMS, London.
[5] Regional Museums Task Force, 2001, *Renaissance in the Regions: a new vision for England's museums*, Resource, 36.

priorities, and as the first evaluation of the impact of Renaissance funding has shown, increased funding has enabled rapid and effective increase in capacity.[6]

Since the first study in 2003 there have been a number of developments in government educational policy, many of which are relevant to museums. Education policy is currently moving away from the perceived rigidity of the National Curriculum and the emphasis on literacy and numeracy that formed the context for most teachers in the study of the first phase of Renaissance funding in 2003. Recent government strategies have encouraged a flexible, creative and innovative approach to teaching and learning which involves schools in developing integrated partnerships with community agencies in a way that offers considerable opportunities for schools and museums to work together. The research findings reported in this study illustrate some of the ways in which museums and schools are, as a result of additional funding through the continuing Renaissance programme, enabling more children and young people to benefit from successful learning from culture. Government strategies are underpinned by a focus on social inclusion, and the research findings will show how museums are working with high numbers of schools in areas of deprivation and where the percentages of children entitled to free school meals are high.

Every Child Matters, introduced in 2003 and followed by a new legal framework outlined in the Children Act 2004, concerns the development of a more integrated way of working with children and families and focuses on the achievement of five outcomes for children: to be healthy, stay safe, enjoy and achieve, make a positive contribution and achieve economic well-being.[7] These five outcomes act as a framework for much current government strategy in relation to children. Museums and galleries are some of the institutions that can work with inter-agency partnerships to help deliver and achieve these outcomes, and in addition, education in museums has been aware of the significance of planning and evaluating in relation to outcomes (in this case, learning outcomes) since the development in 2001 of the Generic Learning Outcomes approach used by RCMG in the Renaissance evaluation in 2003 and 2005, and now familiar across the museum, library and archive sector.

Excellence and Enjoyment: a strategy for Primary Schools, introduced in 2003, values a broad and rich approach to the curriculum where teachers can feel ownership through having the freedom to shape it and make it their own.[8] It is the Government's open declaration to support creativity and innovation in

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[6] Hooper-Greenhill, E., Dodd, J., Phillips, M., O'Riain, H., Jones, C., and Woodward, J., 2004, *What did you learn at the museum today? The evaluation of the impact of the Renaissance in the Regions Education Programme in the three Phase 1 Hubs*, MLA, London, http://www.mla.gov.uk/resources/assets//I/id1185exec_pdf_6623.pdf

[7] Department for Education and Skills, *Every Child Matters*, http://www.everychildmatters.gov.uk

[8] Department for Education and Skills, 2003, *Excellence and Enjoyment: a strategy for Primary Schools,* DfES, London http://www.standards.dfes.gov.uk/primary/publications/literacy/63553/

the classroom, alongside maintaining overall standards and performance.[9] The strategy document asserts that: 'Promoting creativity is a powerful way of engaging pupils with their learning', and the research findings reported in this study show clearly that museum experiences have the potential to stimulate effective engagement in learning in pupils of all ages.[10]

Excellence and Enjoyment outlines strategies and concepts that have been developed further since 2003, including the focus on the learning of individual children (personalised learning), and links with local communities through extended schools and education outside the classroom.[11] Personalised learning conceptualises the learner as being at the heart of the education system, and the debate about how this can be done is under way.[12] As this study shows, museum-based learning offers powerful opportunities for learners to make their own meanings and may offer one way of developing a user-centred education service. The DfES e-strategy, discussed in *Harnessing Technology: Transforming Learning and Children's Services*, expresses aspirations relating to the development of personalised learning through the use of the internet.[13] Museums are well-placed to co-operate in this development and the research shows how the use by teachers of museum web-based resources is already well established. Over many decades, museums have explored their relationships with communities, and as the *Education Outside the Classroom Manifesto* states: 'visiting a museum... (as part of) the world beyond the classroom can stimulate, motivate and bring learning to life'.[14] This research supports this statement very strongly indeed.

The DfES *14-19 Education and Skills White Paper* published in February 2005 describes the aims of improving the educational experience for older children, with special emphasis on increasing numbers of young people staying on at school after 16 years of age, and on enabling more young people to achieve their full potential.[15] The Green Paper *Youth Matters* was published in July 2005, and emphasises the challenge to achieve a balance

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[9] Department for Education and Skills, 2003, *Excellence and Enjoyment: a strategy for Primary Schools,* DfES, London
http://www.standards.dfes.gov.uk/primary/publications/literacy/63553/

[10] Department for Education and Skills, 2003, *Excellence and Enjoyment: a strategy for Primary Schools,* DfES, London, 31.

[11] Department for Education and Skills, 2003, *Excellence and Enjoyment: a strategy for Primary Schools,* DfES, London
http://www.standards.dfes.gov.uk/primary/publications/literacy/63553/

[12] Leadbetter, C., 2004, *Learning about personalisation: how can we put the learner at the heart of the education system?* DfES, DEMOS and NCSL,
http://www.standards.dfes.gov.uk/innovation-unit

[13] Department for Education and Skills, 2005, *Harnessing Technology: Transforming Learning and Children's Services*, DfES, London,
http://www.dfes.gov.uk/publications/e-strategy/

[14] Department for Education and Skills, 2005, *Education Outside the Classroom Manifesto,* http://www.dfes.gov.uk/consultations/conDetails.cfm?consultationId=1370

[15] Department for Education and Skills, 2005, *Education and Skills White Paper*, DfES, London, http://www.dfes.gov.uk/publications/14-19educationandskills/

for teenagers and young people between rights and responsibilities.[16] The paper identifies the challenges involved in engaging young people in positive and empowering activities, including volunteering within their communities. While museums are most frequently considered as environments which stimulate younger pupils, this research shows clearly how older pupils also find museums inspiring places to learn in a different way from school.

The recent Department for Culture, Media and Sport Five Year Plan, *Living Life to the Full*, 2005[17] takes the view that 'participation in cultural activity enriches lives'.[18] This strategy recognises that not every child has the chance to experience a rich cultural life because of social exclusion or deprivation. The Government's cultural offer is to ensure that, depending on the local resources and the needs of young people, young people should be entitled to participate in cultural activity including visits to cultural institutions such as museums or galleries.

All our Futures: Creativity, Culture and Education seeks to encourage the development of creativity in all individuals through education. This can be achieved through, 'imaginative activity fashioned so as to produce outcomes that are both original and of value'.[19] Since its publication in the late 1990s, the Qualifications and Curriculum Authority (QCA) has been working with teachers to develop creativity within the National Curriculum; and have, among other initiatives, produced a pack, *Creativity find it, promote it* for teachers.[20]

Together, these strategies suggest that a new infrastructure for children, young people and the agencies that work with them is developing which will require museums to be proactive in relation to promoting their value for learning and responsive to the needs of new integrated multi-agency partnerships. The research findings strongly suggest that many museums are anticipating these changes and are positioning themselves to take advantage of the new opportunities that are emerging.

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[16] Department for Education and Skills, 2005, *Youth Green Paper, Youth Matters*, DfES, London, http://www.dfes.gov.uk/publications/youth/

[17] Department for Culture, Media and Sport, 2005, *Living Life to the Full*, DCMS, London http://www.culture.gov.uk/global/publications/archive_2005/dcms_5yr_plan.htm?properties=archive%5F2005%2C%2Fglobal%2Fpublications%2Farchive%5F2005%2F%2C&month=

[18] Department for Culture, Media and Sport, 2005, *Living Life to the Full*, DCMS, London, 19.

[19] National Advisory Committee on Creative and Cultural Education, 1999, *All our Futures: Creativity, Culture and Education,* DfES, London http://www.dfes.gov.uk/naccce/index1.shtml

[20] Qualifications and Curriculum Authority, *Creativity: find it, promote it*, http://www.ncaction.org.uk/creativity/

1.2 Renaissance in the Regions

The Renaissance in the Regions report, written by the Regional Museums Task Force and published by Resource/MLA in October 2001,[21] recommended a new, integrated framework for England's regional museums, based on a structure of nine regional hubs. In October 2002, DCMS announced that it would provide £70 million over the following four years to support this national programme to transform regional museums. This was a landmark decision, with central government funding being allocated to museums in the regions for the first time. In order to implement the programme to maximum effect, three hubs were selected to receive funding in the first phase. The three Phase 1 Hubs consist of museums in the North East, West Midlands and the South West (see Appendix 1 for a list of museums and Appendix 2 for a map of Hubs and museums). The three Phase 1 Hubs, who jointly received 70% of the available funding, were seen as 'Pathfinder' Hubs with responsibility to deliver clear results in support of education, learning, community development and economic regeneration to demonstrate the value of government investment. The remainder of the funding was shared amongst the other six Hubs.[22]

A list of eight priorities has been established, which include 'Developing a comprehensive service to schools', 'Reaching a wider community', and 'Improving access to knowledge and information'. It is hoped that the school service would 'increase learning within a subject area, improve achievement levels and satisfaction among children, give a better understanding of connections between subjects, increase cultural respect and understanding and improve their ability to work with others'.[23] The community programme aimed to both broaden and increase the use of museums through socially inclusive events, tailoring services to audience needs and the promotion of museums to new audiences.[24] Museum education was identified as a priority area; the creation of a comprehensive service for schools began quickly, and museums rapidly developed their Education Programme Delivery Plans (EPDP). The research findings show the impact of these plans on relationships between schools and museums.

In addition, education policy emphasises the importance of outcomes; MLA has been working on the development and implementation of an outcomes-based approach to museum education since 2001 (see paragraph 1.1).

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[21] Regional Museums Task Force, 2001, *Renaissance in the regions: a new vision for England's museums*, Resource.
[22] MLA, 2003, *Renaissance News*, 1, August.
http://www.mla.gov.uk/resources/assets//R/rennews01_pdf_6759.pdf
[23] MLA, 2003, *Renaissance News*, 1, August.
http://www.mla.gov.uk/resources/assets//R/rennews01_pdf_6759.pdf
[24] MLA, 2003, *Renaissance News*, 1, August.
http://www.mla.gov.uk/resources/assets//R/rennews01_pdf_6759.pdf

1.3 Researching the impact of Renaissance funding in the Phase 1 Hub museums: *What did you learn at the museum today?*, 2003

Between August and October 2003 RCMG conducted research into the impact of learning on school-aged children through school visits to museums, out of school activities and holiday activities in the three Phase 1 Hub museums. The purpose of this study was to explore the initial impact of Renaissance-funded Phase 1 Hub museums' education programmes on users during the first part of the autumn term 2003. The research was conceptualised around the Generic Learning Outcomes (GLOs), an approach developed by RCMG for MLA during the Learning Impact Research Project (LIRP).[25] Five GLOs of learning in museums and cultural settings were identified as the following:

- Increase or change in Knowledge and Understanding
- Increase or change in Skills
- Change in Attitudes or Values
- Enjoyment, Inspiration, Creativity
- Action, Behaviour, Progression

The GLOs provided the conceptual structure for the research tools, and for the analysis and interpretation of the resulting data.

In the largest survey of this kind ever undertaken in the UK, 936 teachers and 20,604 school-aged children supplied their thoughts about the education programmes they had attended in the Renaissance Phase 1 Hubs in September and October 2003:

- The first term of Renaissance investment (Autumn term 2003) saw a 28% increase in school-aged children visiting museums in Phase 1 Hubs

- 95% of the teachers thought regional museums were 'important' or 'very important' for their teaching

- 73% of the teachers believed their pupils learnt new subject-specific facts thanks to their museum visit

- 94% of teachers saw museum visits or activities as directly linking to the National Curriculum

- 90% of pupils at KS2 and below said they had learnt some new things

- 87% of the KS3 and above pupils said they had discovered some interesting things from the visit they had just completed.

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[25] Hooper-Greenhill, E., Dodd, J., Moussouri, T., Jones, C., Pickford, C., Herman, C., Morrison, M., Vincent, J., and Toon, R., *The Generic Learning Outcome system: measuring the outcomes and impact of learning in museums, archives and libraries. The Learning Impact Research Project (LIRP)*, MLA, London, 2003

These findings demonstrated the level of achievement in relation to the intentions of Resource/MLA and in relation to one of the two targets set by HM Treasury (to increase contacts between Hub museums and children by 25% by 2005/06).[26]

[26] MLA, 2004, *Renaissance News*, 3, July, http://www.mla.gov.uk/resources/assets//R/rennews03_pdf_6703.pdf

1.4 Building on the first study: a second study and its aims

In June 2005, RCMG was commissioned by MLA to repeat and extend the research. The second research study had the following aims:

- To provide evidence of impact on pupils' learning of continued funding of museum education programmes for advocacy purposes for the Treasury's Spending Review 2006 (SR2006)
- To produce the start of a trend series for Phase 1 Hub museums
- To pilot the same evaluation techniques for Phase 2 Hub museums
- To establish a research model that can be replicated over time as needed by MLA.

1.5 Specific objectives of the second study

The objectives of this second research study were:

To provide evidence of impact on pupils' learning of continued funding of museum education programmes for advocacy purposes for SR2006:

- To produce evidence from 1,500 teachers and 30,000 pupils (if possible)
- To document numbers of pupils (and teachers) using museums during September and October 2005 and compare this with 2002 and 2003
- To document in quantitative terms the impact of the learning that has taken place between September and October 2005 and compare this with the findings from 2003
- To describe this learning in qualitative terms
- To analyse the learning outcomes using the GLOs, relating these to the specific outcomes posited by MLA and DfES.

To produce the start of a trend series for Phase 1 Hub museums:

- To carry out research in all 36 museums that participated in the first study
- To explore the relationships between the first and the second research studies through comparisons, contrasts, in-depth investigation etc.
- To work with museum participants with as much transparency and detail as possible to increase their understanding of the research purposes and processes.

To pilot the same evaluation techniques for Phase 2 Hub museums:

- To carry out research in up to 18 Phase 2 Hub museum sites. (This represents a sample of 14% of the 129 museums). The sample to consist of 2/3 sites of the lead partner in each of the Phase 2 Hubs, selected according to the highest levels of educational use
- To review the findings for the Phase 2 Hub museums in relation to the findings for the Phase 1 Hub museums, considering the similarities and differences of impact on learning and the possible reasons for this,

especially bearing in mind the differences in sample sizes (100% for Phase 1 and 14% for Phase 2 museums)
- To work with museum participants with as much transparency and detail as possible to increase their understanding of the research purposes and processes.

To establish a research model that can be replicated over time as needed by MLA:

- The research tools to be based on the tools used in the first study, with limited amendments where necessary
- As far as possible the second study to be based on the first to enable comparison and the incremental building up of consistent data.

1.6 Research planning

Certain basic elements of the research process were agreed at the inception of the research project:

- The research methods would include both quantitative and qualitative methods.
- The GLOs approach would be used in the design of tools and the analysis and interpretation of evidence.
- Where possible, the issues that arose during the first study, and those that arose during the linked DCMS Strategic Commissioning research (2003) would be explored.
- Museum participants in the research would be fully briefed and their views about the research processes considered in the final research design, especially in the design of research tools.
- Research findings would be explored and discussed by the research team from RCMG, the clients (MLA), and the research participants from the Phase 1 and Phase 2 Hub museums at a research seminar prior to the completion of the final report.

1.7 Research team

Professor Eilean Hooper-Greenhill (Research Director)
Jocelyn Dodd (Deputy Director)
Dr. Lisanne Gibson (Senior Researcher)
Dr. Martin Phillips (Research methods advisor)
Ceri Jones (Researcher)
Emma Sullivan (Researcher)
Barbara Lloyd (Financial control)
Bob Ahluwhalia (Office)

1.8 Timescale for the research

The research was carried out between June and December 2005.

RESEARCH TIMETABLE - What did you learn at the museum today? 2005 **June 2005- January 2006**	J	J	A	S	O	N	D	J
Develop research design Design tools Person spec. for RA post Identify and recruit data analysis company Meet MLA to confirm research design Agree & confirm contract	🟥							
Plan research process in detail Confirm tools with data entry company Briefing meeting with all museum participants Print and circulate tools Set up freepost system Advertise RA post		🟦						
Send Form D & briefing notes by 5th August Print evaluation packs Send Evaluation packs (forms A & B) out by 31st August			🟧					
Appoint RA Set up 3 case-studies Set up 3 focus groups Case - study 1 Focus group 1 Pilot data run Form D returned				🟪				
Data collection in museums				🟩	🟩			
Case - study 2 & 3 Focus group 2&3				🟪	🟪	🟪		
All Q's to data company by 4th Nov Progress report to MLA by 8th Nov Stats returned by 15th Qualitative & Quantitative analysis and interpretation					🟧	🟧		
Report drafting					⬛	⬛	⬛	
Research seminar 5th Dec. Report complete by 15th Dec.							🟦	
Summary document by 27th Jan Archive data Other documents (flip book) not costed in this proposal								🟫

1.9 Research ethics

All research was carried out within the University of Leicester's code of conduct for Research and Copyright and Data Protection.[27]

The following guidelines provide an ethical context for the research:

British Sociological Association, 2002, *Statement of ethical practice for the British Sociological Association*,
http://www.britsoc.co.uk/new_site/index.php?area=equality&id=63

Social Research Association, 2003, *Ethical Guidelines,*
http://www.the-sra.org.uk/ethicals.htm

British Educational Research Association, 2004, *Revised Ethical Guidelines for Educational Research,* http://www.bera.ac.uk/publications/guides.php

Economic and Social Data Service, *Ethical and legal considerations*,
http://www.esds.ac.uk/aandp/create/ethical.asp

The Market Research Society, *Standards and Guidelines*,
http://www.mrs.org.uk/standards/guidelines.htm

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[27] University of Leicester, *Copyright and Data Protection Code*,
http://www.le.ac.uk/webcentre/regulations/copyright.html and *Research Code of Conduct,* http://www.le.ac.uk/research/ResearchCodeofConduct.doc

1.10 Conclusion

The Renaissance programme has been a powerful tool for the modernisation and development of museums in the English regions, and a major element of this has been the development of museum education services.

The results of the first study into the impact of the funding for pupils' learning outcomes showed a 28% increase in pupil contacts, high levels of teacher satisfaction, high levels of teacher confidence in their pupils' learning and tremendous enjoyment experienced by pupils of all ages.

The second research study in 2005, which is reported here, has built on the first study in 2003. The research took place between July and December 2005, and was designed to be comparable with the first study in 2003.

The Phase 1 Hub museums were all involved, while a much smaller sample (of approximately14%) was sought from the Phase 2 museums, and with this group the evaluation was seen as a pilot study.

During the period since the first study in 2003, a number of new government initiatives have been introduced which have freed up teachers' use of the National Curriculum, and which, through increased emphasis on pupils' enjoyment, creativity and personalised learning, have opened up new opportunities for engagement between museums and schools. The research findings of the 2005 study, to be described and analysed in this report, will show how many museums and galleries have already responded to these initiatives and, in partnerships with schools, are in a position to act as powerful partners within new educational structures.

Section 2 of this report sets out the research methods through which the research has been carried out.

SECTION TWO

RESEARCH METHODS

2.0 Introduction

The research study involved 69 museums in all; 47 museums in the three Phase 1 Hubs and 22 museums in the Phase 2 Hubs, more than was planned. The research in which these museums took part involved a full range of research methods which produced different kinds of evidence that could be linked to produce a broad and deep picture of the learning outcomes of pupils visiting museums.

Methods included a large-scale survey of 1,643 teachers (Form A) and 26,791 pupils (Form B), collection of pupil contact numbers (Form C), a survey of museum educators' views of the impact of the Renaissance programme (Form D), three focus groups and three case-studies involving a total of 31 teachers and 29 pupils and two seminars with museum education staff.

After review, the research methods from the first study in 2003 were used, with one or two modifications and additions, including an increased emphasis on qualitative data. Analysis and interpretation involved an external data analysis company (LISU- Library Information and Statistics Unit, Loughborough University), and the research team.

Most of the museums involved in data collection worked hard to give out and collect Forms A and B, which were combined in Evaluation Packs, and were given out to teachers at the end of their visit to the museum. However, some museums appeared not to fully grasp the purpose or process of the research, and some had difficulty with distribution and return of Evaluation Packs. Forms C and D were completed without too much difficulty, although most were returned late. Case-studies were difficult for the museums to arrange, but have proved vital to the research. The two seminars organised for the research have also proved useful.

2.1 Collecting and generating evidence for the second study

2.1.1 The museums in the study

The research study involved 69 museums in all; 47 museums in the three Phase 1 Hubs and 22 museums in the Phase 2 Hubs. As nomenclature is confusing, this study used specific terminology. Museums were identified (where relevant) as within and part of a 'museum service'; specific individual museums were represented as 'museum sites'. Some museum services (like the Horniman Museum, for example) consisted of only one museum, whereas some local authority museum services (like Tyne and Wear Museums) consisted of a large group of museums sites all managed by the same authority.

The second study aimed to include the same 36 museums in the Phase1 Hubs as in the first study in 2003. In the event, although all the 14 museum services were involved as before, a larger number of museum sites, 47 in all, were included in 2005. Each of the museum services that made up each of the three Phase 1 Hubs was included (see Table 2.1.1a).

Table 2.1.1a: The 14 museum services and the 47 museum sites in the three Phase 1 Hubs

Hub	List of museum services and their sites
SW	**Bristol Museums, Galleries and Archives**
	Blaise Castle House Museum
	Bristol Industrial Museum
	City Museum and Art Gallery
	Georgian House
	Kings Weston Roman Villa
	Red Lodge
SW	**Plymouth City Museum and Art Gallery**
	City Museum and Art Gallery
	Elizabethan House
	Merchant's House
	Plymouth Dome
	Smeaton's Tower
SW	**Royal Cornwall Museum, Truro**
	Royal Cornwall Museum
	Exeter City Museums and Art Gallery
	Royal Albert Memorial Museum
	Connections Discovery Centre
	St Nicholas Priory
SW	**Russell-Cotes Art Gallery and Museum, Bournemouth**
	Russell-Cotes Art Gallery
NE	**Beamish, the North of England Open Air Museum**
	Beamish
NE	**The Bowes Museum, County Durham**
	The Bowes Museum
NE	**Hartlepool Arts and Museum Service**

Hub	List of museum services and their sites
	Museum of Hartlepool
	Hartlepool Art Gallery
NE	**Tyne and Wear Museums**
	Arbeia Roman Fort and Museum
	Discovery Museum, Newcastle-upon-Tyne
	Hancock Museum, Newcastle-upon-Tyne
	Laing Art Gallery
	Monkwearmouth Station Museum
	Segedunum Roman Fort, Baths and Museum, Wallsend
	Shipley Art Gallery
	South Shields Museum and Art Gallery
	Stephenson Railway Museum
	Sunderland Museum and Winter Gardens
	Washington F Pit, Sunderland
WM	**Birmingham Museums and Art Gallery**
	Aston Hall
	Blakesley Hall
	Museum of the Jewellery Quarter
	Sarehole Mill
	Soho House
WM	**Coventry Arts and Heritage**
	Herbert Art Gallery and Museum
	Lunt Roman Fort, Baignton
	Priory Visitor Centre
WM	**Ironbridge Gorge Museums Trust[28]**
	Blists Hill Victorian Town
	Coalport China Museum
	Darby Houses
	Enginuity, Coalbrookdale
	Iron Bridge Tollhouse
	Jackfield Tile Museum
	Museum of Iron and Darby Furnace
	Museum of the Gorge
	Quaker Burial Ground
WM	**Potteries Museums and Art Gallery**
	Etruria Industrial Museum
	Ford Green Hall
	Gladstone Working Pottery Museum
	Potteries Museum and Art Gallery
WM	**Wolverhampton Arts and Museums**
	Bantock House and Park
	Bilston Craft Gallery and Museum
	Wolverhampton Art Gallery

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[28] Ironbridge Gorge Museum is counted as one service and one site to be comparable to 2003, as in the first study the pupil numbers were presented in aggregate, and because of this, the individual sites were not counted individually in that study.

It was intended that only 18 of the museums in the six Phase 2 Hubs should be included in the study. This second study was regarded by MLA as an opportunity to pilot the research methods and to introduce the museums to evaluation research. At the beginning of the first study in 2003 there was considerable anxiety in the museums involved, which had been dissipated by the end of the research period, and it was hoped that a pilot study in a small number of museums would introduce evaluation gently to museums in the Phase 2 Hubs.

In the event, 22 museums from 15 museum services were included in the second study in 2005 (See Table 2.1.1b). These 22 museums represented approximately 17% of the total number of museums (129) in the six Phase 2 Hubs. The museums which participated in the research were selected because of high levels of educational use. This group of museums therefore included many with long-established, successful and highly active educational services. The choice of which museums to include in the research has had a strong impact on the findings where very little distinction could be found between the museums in the Phase 1 Hubs and the museums in the Phase 2 Hubs across many of the dimensions of the research.

Table 2.1.1b: The 22 museum sites in 15 museum services from the Phase 2 Hubs

Hub	List of museum services and their sites
EM	**Leicester City Museums Service**
	Jewry Wall
	New Walk
EM	**Lincolnshire Museums Service**
	The Collection, Lincoln
EE	**Norfolk Museums and Archaeology Service**
	Roots of Norfolk, Gressenhall
EE	**Colchester Museums**
	Colchester Castle Museum
	Hollytrees Museum
EE	**Luton Museums Service**
	Wardown Park Museum
	Stockwood Park Museum
LO	**Horniman Museum**
	Horniman Museum
LO	**Museum of London**
	London Wall
	Museum in Docklands
NW	**Manchester City Galleries**
	Manchester Art Gallery
NW	**Tullie House Museum and Art Gallery, Carlisle**
	Tullie House Museum and Art Gallery
NW	**Bolton Museums, Art Gallery and Aquarium**
	Bolton Museum

SE	**Hampshire Museums and Archives Service**
	Milestones
SE	**Brighton & Hove Museums**
	Museum and Art Gallery
YO	**Leeds Heritage Services**
	Temple Newsam House
	City Art Gallery
	Lotherton Hall
	Armley Mills[29]
YO	**Hull Museums and Art Gallery**
	Ferens Art Gallery
YO	**York Museums Trust**
	Castle Museum

2.1.2 Using multiple methods

The research study consists of both fixed and flexible research processes.[30] With 'fixed processes', the research plan and the research tools are not subject to change during the research process, whereas with 'flexible processes' the research tools and plans need to be used in a fluid way and may change as the research moves on. Where research is being carried out that requires people to reflect on their views and experience, a fixed research tool such as a questionnaire is not appropriate and more useful results can be gained through 'conversations with a purpose'.[31] These are loosely structured interviews which respond to the situation in which they are held, but which (in our research) have very clear objectives in relation to the information needed by the researcher.

The fixed processes in this research are:

- a large-scale survey of 1,643 teachers and 26,791 pupils which examines their views about the outcomes of learning immediately following a museum visit (Evaluation Packs containing Forms A and B)
- a questionnaire to museum education staff in the 29 museum services in the study that explores their views of the significance of Renaissance funding (Form D)
- a second short questionnaire to museum education staff asking for details of numbers of school-aged children visiting in September and October 2002-05 (Form C).

The flexible element of the research plan involves:

- three focus groups of teachers
- three school case-studies
- two seminars with the museum research participants.

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[29] Packs were sent to this site but were used in outreach sessions, so no actual visits were made here by schools during the research period.
[30] Robson, C., 2002, *Real world research*, Blackwell Publishing, 4.
[31] Mason, J., 1996, *Qualitative researching*, Sage, 38.

The fixed elements of the research were managed through a series of forms (Forms A-E). Copies of all forms are included in Appendix 9. The flexible elements did not have specific research tools, but their objectives were very carefully identified, discussed and recorded prior to the visit and/or interview/focus group.

The various research methods are used in a complimentary way, to enhance understanding of the research puzzle.[32] Thus the large scale survey of the views of teachers and pupils provides an overview of their attitudes about the extent to which each of the five GLOs is achieved following a museum visit, while a more in-depth understanding and examples of the occurrence and character of these outcomes has been gained through the school case-studies. Discussions in focus groups with teachers facilitated a deeper understanding of, and in some cases a challenge to, some of the results of the present (2005) and the first study (2003), from the perspective of the teachers. The flexible elements of the research (the focus groups and case-studies) produced qualitative data which allowed detailed analysis of the contexts and character of the learning in museums which was mapped out through the large-scale quantitative study.

While most of the research processes explored the impact of Renaissance funding on the learning outcomes of pupils, one element (Form D, new in this second study), explored the perspectives of the museum education staff on the impact of Renaissance on their professional practice.

The quantitative elements of the study have allowed for a statistical description and analysis of the data collected from teachers, pupils and museum staff. It has been possible to draw comparisons between this study in 2005 and the earlier one in 2003. Differences between museums in the Phase 1 and Phase 2 Hub museums are also explored by using the data from the 2005 study only.

There are slight differences between the two studies and because of this a number of issues are raised that it is important to note. The composition and size of samples are different in the two studies; in 2005 1,643 Teachers' Questionnaires were received compared with 936 in 2003. In 2003 all Phase 1 museums were included in the research creating a 100% sample; in 2005 all Phase 1 museums were included again along with 22 Phase 2 Hub museum sites (representing 17% of 129 museums). Museums from the Phase 2 Hubs were selected according to highest levels of educational use, and thus were similar in many respects to the Phase 1 museums making comparisons between the two sets of results possible. However, generalising the results of both the 2003 and 2005 studies to other Phase 2 museums should be undertaken with caution as museums selected for the sample are likely to have a well established educational service that may not be in place in other museum services.

The difference in sample size also means that the sampling errors are not the same for both studies. The sampling error is calculated at 2.5% with a 95% confidence interval. This means that any percentages quoted in respect of the 2005 data can be expected to vary by 2.5% either way. The confidence

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[32] Robson, C., 2002.

interval is used to qualify the sampling error, and at 95% it can be seen to have a 5% chance of being inaccurate. This is the most conservative estimate of the sampling error as it is based on the number of teachers' responses on a single visit to the museum (the concept of single and multiple visits is explored further in Section 3.2). In 2003 originally no sampling error was calculated, however when comparing 2005 data the 2003 study can be assumed to have a sampling error of 3.4% (based on the number of single visits). This is larger than 2005 because of the smaller sample size.

Because of these differences in sample sizes, where it has seemed important, variation between the findings of the two studies was assessed where possible using a chi square test. This test compares the proportions of two different samples to determine whether there is a significant difference between the two. As actual portions are being compared chi square tests work with the raw numbers rather than percentages. Thus, the chi square test was employed where there appeared to be a difference between the 2003 and 2005 results to determine if this could be considered statistically significant. Differences were accepted as significant if the result of the chi square test was found to show a significance level of 0.05 or below; this means that there is a 5% possibility that differences regarded as significant were in fact due to random variation. The chi square test was also used to determine whether relationships existed between different variables within the 2005 study; for example whether teachers' work, when linked to the curriculum had any relation with how importantly they rated various learning outcomes. Again the relationship was accepted as significant if the chi square test showed a level of significance of 0.05 or below. Throughout the report when a difference is referred to as 'significant' it can be assumed that this refers to a statistically significant difference at 0.05 or below. It is important to remember that while differences are considered in terms of their statistical significance this does not mean that other differences should be discounted because they do not show statistical significance. Chi square tests cannot always detect a real difference if the sample size is not large enough; in order to address this where percentages appear to show an important difference this is reported even when it is not statistically significant. This ensures any changes that could be regarded as notable findings are not overlooked.

The diverse methods used in this research have been carefully chosen because they were judged to be appropriate to generate the kind of information that was needed for this research.[33] The five GLOs were used to structure the research tools and to shape the analysis and interpretation of the data. The GLOs are based on an interpretivist ontology; social reality is understood as constructed, subjective and therefore multiple.[34] The learning theory underpinning the GLOs is constructivist and socio-cultural; individuals construct their own meanings of their experience, but within social and community contexts.[35]

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[33] Denscombe, M., 2002, *Ground rules for good research: a 10-point guide for social researchers*, Open University Press, 24.

[34] Denscombe, M., 2002.

[35] Hooper-Greenhill, E., 2000, *Museums and the interpretation of visual culture*,

2.1.3 Reviewing and modifying the methods from the first study

It was intended that this second study should repeat and extend the first study which resulted in the report *What did you learn at the museum today?* At the start of the second study, the first study was thoroughly reviewed by the research team, and the linked study carried out for DCMS/DfES, which resulted in the report *Inspiration, Identity, Learning: the value of museums*, was also reviewed.[36] A list of themes for possible further exploration during the present (second) study was drawn up and used for the basis of discussion with MLA. It was proposed to MLA as part of the commissioning and designing of the research to extend the qualitative elements of the research design because this would provide more depth and detail about both children's learning and also about teachers' engagement with museums. This approach to the research was also needed to probe the character of the GLOs and to explore their inter-relationships within learning processes. Using the opportunity of gathering qualitative data in this way enabled a link between the quantitative findings of the first study in 2003, and the second study in 2005. This went some way to alleviate the problems of the very rapid timescale that characterised both research studies, and enabled the findings of the first study to shape in part the data generation. However, new (sometimes puzzling) findings which have emerged during the second study were not able to be explored through discussions with teachers.

The research tools used in the first study were reviewed, modified and supplemented where necessary. As one of the aims of the study was to produce a research model that could be replicated as required, and as the methods and tools used in the first study had on the whole worked very well, modification was kept to a minimum.

The table below outlines where modifications to research methods took place for the second study in 2005. Comparison of the tools used in both the 2003 and the 2005 studies, which can be located in the relevant report Appendices, can be used for further information.

Form A included two new questions in 2005. Because *Enjoyment, Inspiration, Creativity* had proved one of the most important learning outcomes for teachers in 2003, more information about this was sought through Q.12: 'To what extent do you think your pupils will have enjoyed or been inspired by their museum visit?'   MLA wanted more information on the general use of museums and a second new question was Q.25 which concerned use over the past two years of museums in relation to visiting (as a teacher), using on-line resources and borrowing an object or handling box.

Routledge; Hooper-Greenhill, E., 2004, 'Measuring learning outcomes in museums, archives and libraries: the Learning Impact Research Project (LIRP)', *International Journal of Heritage Studies*, 10, 2, 151-174.
[36] Hooper-Greenhill, E., Dodd, J., Phillips, M., O'Riain, H., Jones, C., and Woodward, J., 2004, *Inspiration, Identity, Learning: The Value of Museums, The evaluation of the impact of DCMS/DfES Strategic Commissioning 2003-2004: National/Regional Museum Education Partnerships,* DCMS and RCMG, University of Leicester
http://www.le.ac.uk/museumstudies/rcmg/rcmg.htm

A small modification was made to Form A, Q.12-19 which asked teachers about how they rated the importance of each of the GLOs. This was the inclusion of a 'don't know' column, to allow teachers to express a lack of conviction if they wanted. This is better practice in research, but it has meant that a comparison of the results between 2003 and 2005 must be made on the basis of taking this modification into account. In the event, however, this new category has not had much impact, but a discussion is included here of the impact of related categories, and the effect of a slightly different form of statistical analysis because this has had an effect on comparisons between the two studies. In the analysis of the numerical data in 2003, a category in the statistical tables- 'not stated'- referred to missing values, where teachers had not ticked any box at all. In 2005, teachers could either tick 'don't know', or leave the boxes blank. In the analysis of the statistical data in 2005 (carried out by a different company from 2003) where the box was blank this was included in a 'missing' category. In relation to 'missing' categories, there are some large values. For example, 15% of teachers in 2005 did not tick a box in relation to Action, Behaviour, Progression, whereas the value of the 'don't know' category is tiny at less than 1%. In comparison, in 2003, 'not stated' includes 4% of responses. More teachers in 2005 are unwilling to rate Action, Behaviour, Progression than in 2003, but this has shown up in the 'missing' category, rather than the new 'don't know' category. This large 'missing' category has the effect of depressing the other categories in relation to this GLO.

Table 2.1.3a: Outline of changes and modifications to research methods used in the first study

Research tool	Status
Form A: Evaluation of school visits to museums in September and October 2005	Teachers' Questionnaire (Addition of new question on Enjoyment, Inspiration, Creativity; addition of new question on teachers' general use of museums; 'don't know' category added to Q. 12-19; more open-ended question about teachers' themes)
Form B: My Museum Visit	KS2 and below Pupils' Questionnaire (Minor modifications only)
Form B: My Museum Visit	KS3 and above Pupils' Questionnaire (A space for open-ended comments was inserted)
Form C: Numerical data collection of pupil usage September/October 2002, 2003, 2004, 2005	Museum education staff (Modified to reflect MLA categories more closely)
Form D: Impact of Renaissance funding on museums and education	Museum education staff (A new form. The previous Form D collected information on holiday activities which was not required for the second study)
Form E: Museum contact details (and estimated numbers of KS2 and KS3 pupils)	Museum education staff (A new form to facilitate communication)
Briefing notes for museum staff	(As before)
Briefing notes for teachers	(As before)
Focus groups x 3	(Smaller groups were used this time to enable more in-depth conversations)
School case-studies x 3	(A new element in the research to generate additional depth material)

2.1.4 The relationships between the research objectives and the research methods

The various research methods were selected and specific tools designed to produce evidence of the outcomes of museum-based learning. Table 2.1.4a below shows which methods and tools related to which objectives.

Table 2.1.4a: The relationship between the research objectives and the research methods

Objectives	Methods	Tools
To provide evidence of impact on pupils' learning of continued funding of museum education programmes	Questionnaire for: Teachers Pupils KS2 Pupils KS3/4 Case-studies and focus groups	Form A Form B - KS2 and below Form B – KS3 and above
To explore patterns of use (and the reasons behind them) of museums, issues of museum/school partnerships, relationships between GLOs, attainment, entitlement	Analysis of school post-codes School case-studies x 3, to include observation of museum visits, interviews and focus groups with teachers and pupils, classroom observations (as possible)	Form A Observation, interview and focus group protocols as relevant
To probe patterns of use, teacher support and specific issues arising from earlier studies	Focus groups with teachers x 3	Interview guides
To assess the impact of Renaissance funding on museum education staffing and provision	Questionnaire to all museums participating in study	Form D (new form) Interview protocol
To ascertain numbers of pupils (and teachers) using museums in September and October 2005	Questionnaire to museum education staff to collect numerical data	Form C
To ensure that museum staff and teachers are fully informed about the research process	Briefing notes and seminars with museum staff	Briefing notes

2.1.5 A range of types of evidence

The research processes detailed above resulted in the generation of the following types of evidence:

- Numerical data concerning the use of museums by pupils and teachers during September and October 2005 (Forms A and C)

- Statistical and qualitative data about teachers' use of museums and their perceptions of their pupils' learning in 47 Phase 1 and 22 Phase 2 museums (Form A, case-studies and focus groups)

- Statistical and qualitative data on pupils' perceptions of their own learning in 47 Phase 1 and 22 Phase 2 museums (Form B, case-studies and focus groups)

- Contextual material about schools

- An analysis of free school meal data and the post-code data in relation to deprivation indices[37]

- Descriptions and analysis of the GLOs and their inter-relationships. (Form A, school case-studies and teacher focus groups)

- Pupils' writing and drawing about their museum experiences (Form B and school case-studies)

- Some further qualitative detail of specific issues concerned with teachers' use of museums (teacher interviews as part of school case-studies and teacher focus groups)

- Specific information about the impact of Renaissance funding on staffing and educational provision in the Phase 1 and Phase 2 Hubs (Form D)

- Photographs of pupils in the schools and museums (taken during observations and visits; supplied by teachers, museums and commissioned for this study).

2.1.6 Analysis and interpretation

The analysis and interpretation of the data has been achieved in a number of ways. The Evaluation Packs (Forms A and B) were returned to RCMG and carefully checked before being sent to LISU at Loughborough University, where the data was entered into a statistical database for analysis using Excel and SPSS. The resulting charts were returned to RCMG. A pilot analysis was carried

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[37] This data and the earlier post-code data will also be the subject of an extended 3-year analysis through an ESRC-funded CASE doctoral studentship in partnership with DCMS.

out in late October with the first 400 returns to check that the system was operating as needed, and one or two small amendments were made at this point. We are grateful to LISU for their professional and helpful approach and for keeping to (and in fact bettering) a very tight timetable.[38] The statistical data was fully discussed and reviewed by a sub-group of the research team. Post-codes from the school addresses were checked, completed and analysed in relation to indices of multiple deprivation (IMD 2004). Careful checks were made to ensure that the Teachers' Questionnaires (Forms A) did not contain duplicate information such that double counting could occur. For example, if two teachers accompanying the same class both completed one Form A and gave pupil numbers, if both were counted, this would result in the same pupils being counted twice.

Throughout the report data is presented in tables and charts to aid understanding, and these are accompanied by a base rate. Figures and charts for Form A have a slight difference in base numbers due to some teachers completing only the front section of a questionnaire. The 'all teachers' figure 1643 refers to questionnaires part-completed in this way, while the 1632 figure refers to questionnaires which contained answers from Q.5 onwards. Percentages presented in the report are rounded-up and so do not always add up to 100%.

Discussions at the focus groups and case-study visits were taped where possible, and recorded by hand, and other field notes were made. The transcriptions of the tape-recordings were carried out by Kath's Keying Services, Derby, and again we are grateful for the effective management of this. A second sub-group of the research team worked on the analysis and interpretation of the qualitative data, using contextual material as available. Team and sub-group discussions enabled the structuring of the final report, identified the links between the qualitative and quantitative data, and clarified complex issues. Further details of analysis and interpretation will be included in the discussion of the evidence in the following sections of the report where it is relevant.

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[38] For the first study in 2003, a different company, Infocorp was used. It was judged more convenient to use a local group in 2005, as this would facilitate any necessary meetings. In addition, LISU understands the research context, which was judged to be helpful.

2.2 Research processes

2.2.1 Managing the timetable

The research proceeded rapidly. It was essential to establish and stick to dates for sending out forms and receiving them back. The table below illustrates this.

Table 2.2.1a: Dates of sending out and returning tools

Form	Sent out	Returned by
A	26 August	4 November
B	26 August	4 November
C	5 August	4 November
D	5 August	16 September
E	13 July	20 July

This table and the one below were produced to help communications with the 69 museums which were involved in the research. It was presented to museum participants in the first museum seminar in July, and then emailed to those who were unable to attend on that occasion.

Table 2.2.1b: Research timetable (as presented to museums at the start of the research period)

Action	Research event	Date
RCMG	Plan research	June
RCMG	Brief museums	13 July
RCMG	Form E – send out	14 July
Museums	**Send back Form E**	**20 July**
RCMG	Set up communications	By mid-July
RCMG	Send out Form C and D	4 August
RCMG	Evaluation Packs designed and printed	August
RCMG	Set up analysis	August
Museums	**Receive Evaluation Packs**	**26 August**
Museums	**Send back Evaluation Packs with forms As and Bs**	**As completed by schools Sept- Oct.**
RCMG with help of museums	Case-studies and focus groups	September- November
Museums	**Send back Form D**	**16 September**
Museums	**Last Evaluation Packs returned**	**4 November**
Museums	**Send back Form C**	**4 November**
RCMG	Data to LISU for SPSS analysis	8 November
RCMG	Stats. returned from LISU	15 November
RCMG	Analysis and interpretation • Statistics • Post-code analysis • Focus group and case-studies	November - December
RCMG/ Museums	**Seminar to discuss emerging findings**	**5 December**
RCMG	Final report to MLA	15 December

2.2.2 The forms and the museums

The table below shows the museums in the study, indicating which museums have returned Forms A, C, and D. The discussion below focuses on issues to do with the distribution and return of each of these forms, and then moves on to discuss the qualitative research methods.

Table 2.2.2a: Phase 1 museums and the return of Forms A, C, and D

Hub	Phase 1 Museums	Form A	Form C	Form D
SW	**Bristol Museums, Galleries and Archives**		✓	✓
	Blaise Castle House Museum	✓		
	Bristol Industrial Museum			
	City Museum and Art Gallery	✓		
	Georgian House			
	Kings Weston Roman Villa			
	Red Lodge	✓		
SW	**Plymouth City Museum and Art Gallery**		✓	✓
	City Museum and Art Gallery	✓		
	Elizabethan House	✓		
	Merchant's House			
	Plymouth Dome			
	Smeaton's Tower			
SW	**Royal Cornwall Museum, Truro**		✓	✓
	Royal Cornwall Museum	✓		
	Exeter City Museums and Art Gallery		✓	✓
	Royal Albert Memorial Museum	✓		
	Connections Discovery Centre			
	St Nicholas Priory			
SW	**Russell-Cotes Art Gallery and Museum, Bournemouth**		✓	✓
	Russell-Cotes Art Gallery	✓		
NE	**Beamish, the North of England Open Air Museum**		✓	✓
	Beamish	✓		
NE	**The Bowes Museum, County Durham**		✓	✓
	The Bowes Museum	✓		
NE	**Hartlepool Arts, Museums and Events Service**		✓	✓
	Museum of Hartlepool	✓		
	Hartlepool Art Gallery			
NE	**Tyne and Wear Museums**		✓	✓
	Arbeia Roman Fort and Museum	✓		
	Discovery Museum, Newcastle-upon-Tyne	✓		
	Hancock Museum, Newcastle-upon-Tyne	✓		
	Laing Art Gallery	✓		
	Monkwearmouth Station Museum			
	Segedunum Roman Fort, Baths and Museum, Wallsend	✓		
	Shipley Art Gallery	✓		
	South Shields Museum and Art Gallery	✓		
	Stephenson Railway Museum	✓		
	Sunderland Museum and Winter Gardens	✓		
	Washington F Pit, Sunderland	✓		
WM	**Birmingham Museums and Art Gallery**		✓	✓
	Aston Hall	✓		
	Blakesley Hall	✓		
	Museum of the Jewellery Quarter	✓		

Hub	Phase 1 Museums	Form A	Form C	Form D
	Sarehole Mill	✓		
	Soho House	✓		
WM	**Coventry Arts and Heritage**		✓	✓
	Herbert Art Gallery and Museum	✓		
	Lunt Roman Fort, Baignton	✓		
	Priory Visitor Centre	✓		
WM	**Ironbridge Gorge Museums Trust**	✓	✓	✓
	Blists Hill Victorian Town	✓		
	Coalport China Museum	✓		
	Darby Houses			
	Enginuity, Coalbrookdale	✓		
	Iron Bridge Tollhouse			
	Jackfield Tile Museum	✓		
	Museum of Iron and Darby Furnace	✓		
	Museum of the Gorge			
	Quaker Burial Ground			
WM	**Potteries Museums and Art Gallery**		✓	✓
	Etruria Industrial Museum	✓		
	Ford Green Hall	✓		
	Gladstone Working Pottery Museum	✓		
	Potteries Museum and Art Gallery	✓		
WM	**Wolverhampton Arts and Museums**		✓	✓
	Bantock House and Park			
	Bilston Craft Gallery and Museum	✓		
	Wolverhampton Art Gallery	✓		

Table 2.2.2b: Phase 2 museums and the return of Forms A, C, and D

Hub	Phase 2 Museums	Form A	Form C	Form D
EM	**Leicester City Museums Service**		✓	✓
	Jewry Wall	✓		
	New Walk	✓		
	The Guildhall	✓		
EM	**Lincolnshire Museums Service**		✓	✓
	The Collection, Lincoln	✓		
EE	**Norfolk Museums and Archaeology Service**		✓	✓
	Roots of Norfolk, Gressenhall	✓		
EE	**Colchester Museums**		✓	✓
	Colchester Castle Museum	✓		
	Hollytrees Museum	✓		
EE	**Luton Museums Service**		✓	✓
	Wardown Park Museum	✓		
	Stockwood Park Museum	✓		

LO	**Horniman Museum**		✓[39]	✓
	Horniman Museum	✓		
LO	**Museum of London**		✓	✓
	London Wall	✓		
	Museum in Docklands	✓		
NW	**Manchester City Galleries**		✓	✓
	Manchester Art Gallery	✓		
NW	**Tullie House Museum and Art Gallery, Carlisle**		✓	✓
	Tullie House Museum and Art Gallery	✓		
NW	**Bolton Museums, Art Gallery and Aquarium**		[40]	✓
	Bolton Museum	✓		
SE	**Hampshire Museums and Archives Service**		✓	✓
	Milestones	✓		
SE	**Brighton & Hove Museums**		[41]	✓
	Museum and Art Gallery	✓		
	Preston Park Manor	✓		
	Booth Museum of Natural History	✓		
YO	**Leeds Heritage Services**		✓	✓
	Temple Newsam House	✓		
	City Art Gallery	✓		
	Lotherton Hall	✓[42]		
YO	**Hull Museums and Art Gallery**		✓	✓
	Ferens Art Gallery	✓		
YO	**York Museums Trust**		✓	✓
	Castle Museum	✓		

2.2.3 Forms A and B: the Teachers' and the Pupils' Questionnaires – the Evaluation Packs

Form A was the questionnaire for teachers. The design of Form A was slightly modified from the first study to make it easier to read at speed. The questions were grouped into sections for clarity. Details of school and class were simplified slightly. Two new questions were added; Q.12 asked about Enjoyment, Creativity, Inspiration as this had proved to be one of the most important reasons teachers gave for using museums and the previous version of Form A did not cover this as well as it could have done; and Q.25 asked new questions about teachers' use of museums at the request of MLA.   A 'don't know' category was added to Q.12-19.

There were two versions of Form B, the questionnaire for pupils; Form B Key Stage 2 (KS2) and below was for pupils aged 5-11 years, and Form B Key Stage 3 (KS3) and above was for pupils aged 11-18 years.   Both Form Bs asked the same questions, but in slightly different ways. They had both worked well in the

[39] Except the figure for October 2005 which was not sent for the deadline of 4 November 2005.

[40] Figures were not sent to meet the deadline of 4 November 2005.

[41] Figures were not sent to meet the deadline of 4 November 2005.

[42] Evaluation packs were sent to Armley Mills but these were all used for outreach visits off-site so this site has been discounted.

first study. Form B KS2 and below had included a space for writing or drawing at the bottom of the page which had produced some unexpectedly powerful results and for this study it was decided that the questionnaire for the older pupils would also contain a space for open-ended comments or drawings. This entailed a slight modification in the questions to allow for the space needed.

As in the first study, one Form A and 40 Form Bs were put together into an envelope (an Evaluation Pack) so that they could be given out at the end of a school visit to one of the museums in the study. In contrast to the first study, when 40 copies of both Form B KS2 and below and Form B KS3 and above were included in each envelope, in the present study, only one type of Form B was included and the envelope was marked accordingly.

A system of numbering was used, as in the first study, so that each Evaluation Pack had its own unique number so that each museum, school and Hub could be identified. Museum staff giving out the Evaluation Packs were asked not to separate the Form As and the Form Bs in each pack, to use a separate pack for each group, not to photocopy any of the forms and to discard any unused forms. However, there proved to be complications here.

The Evaluation Packs were given out at the end of a school visit in each of the 69 participating museums during the months of September and October 2005. This seems to have proved more difficult for museums in the second study than in the first, where museum staff appeared to understand what the research processes required, and worked very hard to achieve it. In 2005, it did not seem that all staff involved in the research fully understood what was needed, and as a result the distribution and return of the Evaluation Packs proved more difficult for RCMG to manage than previously.

Some of the Evaluation Packs that were returned to RCMG had the following characteristics:

- contained Form A only
- returned without Form A
- returned with Form Bs mixed together from different packs
- returned with Form A from a different pack.

Where packs were returned with Form As only, which in most cases was because the children were too young to complete the questionnaires, these packs were included in the analysis to maximise available data and were only excluded from a small number of analyses in which teachers' responses are compared with their accompanying pupils. Quite a number of the museums were not clear about how many packs they used. In addition, too many packs were taken away by teachers.

There were considerable problems for many museums in estimating the numbers of Evaluation Packs required. In total 3,812 Evaluation Packs were sent to the museums by RCMG, but not all of these packs were given out. Very many museums appear to have over-estimated the number of visits they expected during September and October 2005, and hence the number of Evaluation Packs they would need.

Museums have not always been able to keep a track of the packs distributed in some of the museums. Where packs have been taken from a central museum to a number of external museum sites to be given out to teachers and then collected up again prior to that teacher leaving the site it proved in some cases difficult to manage and control this process. Where museum staff have been under pressure from other work commitments, have not fully understood the significance of the research, or were new in post, this added to the difficulties. None-the-less, strenuous efforts were made in museums to overcome these problems, although they were not always successful, and in some cases, packs have proved difficult to track.

Where museums have been unclear about numbers of packs given out, it has been difficult for RCMG to establish a view of the response rate of Evaluation Packs. However, through continued conversations with museums, it has been possible to arrive at the best possible estimate of how many packs were given out in each of the 69 museums in the study. From this, taking account of the actual packs returned to RCMG, it is possible to calculate the response rate for each of the museum sites, and a response rate for the study overall.

The following tables below show the estimation, distribution and return of Evaluation Packs.

Table 2.2.3a: Phase 1 museums: estimation, distribution and return of Evaluation Packs

Hub	Museum	Total Evaluation Packs sent	Distribution by museum	Number returned to RCMG	Return rate[43]
NE	Tyne and Wear Museums	355	249	195	78%
	Beamish	165	94	37	39%
	Hartlepool Museums	10	7	4	57%
	The Bowes Museum	50	17	11	65%
SW	Bristol Museums, Galleries and Archives	107	48	26	54%
	Russell-Cotes Art Gallery	50	6	1	17%
	Royal Albert Museum, Exeter	92	92[44]	58	63%
	Plymouth City Museum and Art Gallery	34	23	11	48%
	Royal Cornwall Museum	125	69	27	39%
WM	Birmingham City Museums and Art Gallery	370	271	223	82%
	Wolverhampton Art Gallery	43	29	10	34%
	Ironbridge	180	139	86	62%
	Coventry Arts and Heritage	100	77	73	95%
	Potteries Museums and Art Gallery	150	121	65	54%
Total		1831	1242	827	67%

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[43] This is based on dividing the number of packs handed out by the museum with the number returned to RCMG.

[44] Exeter's figures were based on number of packs we sent rather than how many the museum gave out as we were unable to obtain this information until after the deadline for calculating response rates. Using information obtained after the deadline the actual number of packs given out by the museum was 67 bringing the response rate to 86.5%.

Table 2.2.3b: Phase 2 museums: estimation, distribution and return of Evaluation Packs

Hub	Museum	Total Evaluation Packs sent	Distribution by museum	Number returned to RCMG	Return rate
EM	Leicester Museums	115	64	56	88%
	The Collection, Lincoln	48	44	42	95%
EE	Roots of Norfolk	64	52	38	73%
	Colchester Castle	135	121	50	41%
	Luton Museums	70	59	58	98%
LO	Museum of London	360	163	124	76%
	Horniman Museum	220	113	93	82%
NW	Manchester Art Gallery	150	70	61	87%
	Bolton Museum and Art Gallery	70	54	49	91%
	Tullie House Museum	70	45	38	84%
SE	Milestones	263	57	49	86%
	Brighton Museum and Art Gallery	150	71	69	97%
YO	York Castle Museum	106	63	57	90%
	Ferens Art Gallery, Hull	30	20	19	95%
	Leeds Heritage Services[45]	134	134[46]	118	88%
Total		1985	1130	921	82%

The overall response rate is impressive, although it does not reflect the difficulties in managing the research processes in the museums. Neither does it record the percentage of usable packs returned by museums – only the actual fact of return has been considered and any return of any pack is included. Although some museums sent a considerable percentage of their returns in rather a muddled state, and these have had to be excluded from some analyses (especially where Forms A and B are linked) the overall return rate is very respectable for a large scale survey of this kind. Harvey and MacDonald suggest that the response rate for postal questionnaires is often very low,

[45] Leeds photocopied more packs themselves so there will be a discrepancy in the figures, all these numbers are estimates.
[46] Leeds' figures were based on number of packs we sent rather than how many the museum gave out as we were unable to obtain this information until after the deadline for calculating response rates. Using information obtained after the deadline the actual number of packs given out by the museum was 137 bringing the response rate to 97.8%.

between 10% and 40%, while the response rate for questionnaires administered by interviewers is generally higher, between 40% and 80%.[47] Barnett suggests that the response rate for postal questionnaires may be 50%.[48] The Evaluation Packs were not postal surveys, but neither were they administered by interviewers. They were given to teachers at the end of a school visit to a museum. Arguably, this is a very difficult time to complete a fairly complex questionnaire, and museums were given advice at the beginning of the research process during the briefing seminar as to how to best to aid teachers in completing the questionnaire at a time when the bus might be arriving to take the pupils back to school, the space might be needed by an in-coming group, there might be no level surface on which to lean, and innumerable other calls on the teacher's time might be made.

The response rate of 67% in the Phase 1 museums and 82% in the Phase 2 museums in 2005 can be compared with a response rate of 78% in the first study in 2003.

2.2.4 Form C: Numerical data collection of use of museums by school-aged children September and October 2002, 2003, 2004, 2005

Form C collected numerical data on numbers of school-aged children visiting museums during September and October between 2002 and 2005. Although Form C had much the same purpose as in the earlier study, there was a significant change in the categories for inclusion.

Form C 2003 asked museums to put into a table: 'the total number of pupils involved in museum activities (including visits to museums, outreach to schools etc.).' Form C 2005 was much more specific and detailed and used a different way to describe the young people. It used a set of categories of usage based on the approach that MLA was taking to the DCMS performance indicators for museums.[49] Instead of referring to 'pupils', Form C 2005 asked for the total number of 'school-aged children' (5-16 years) involved in all Hub museum-related activities during September and October, including participation in:

- visits to Hub museum by school-aged children in educational groups accompanied by teacher(s)
- visits to the Hub museums by school-aged children with Special Educational Needs (SEN) or from SEN schools
- organised activities at Hub museums involving school-aged children but not visiting with a school e.g. homework clubs, out of school clubs, Brownies
- outreach activities involving school-aged children which take place in schools (loan boxes count as outreach where facilitated by an education officer or a teacher trained by an education officer)

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[47] Harvey, L. and MacDonald, M., 1993, *Doing Sociology: a practical introduction*, MacMillan, 126.
[48] Barnett, V., 1991, *Sample survey: principles and methods*, Edward Arnold, 68.
[49] These were taken from the MLA Data Collection Guidelines, 4th January 2005, for Hub museums, Templates 1-3. Form C was agreed by MLA prior to distribution to museums in this study.

- outreach activities not organised by their school but in the context of a youth group or community centre activity.

While all the categories set out in the 2005 version are covered in the 2003 categories, it is possible that the more specific guidelines in 2005 may have resulted, for instance, in increased types of group being reported by museums.

Form C 2005 asked all museums to report the numbers of school-aged children between 2002-2005, however, after discussion with MLA, RCMG were asked to disregard the figures provided for 2002-2003, as MLA had discovered in other data collection exercises that these early figures were frequently based on unreliable estimates, as they concerned the period prior to the establishment of guidelines for the collection of data. Accordingly, only those figures concerning the period 2003-2005 are used in this study.

2.2.5 Form D: The impact of Renaissance funding on museums and education

Form D collected information about the impact of Renaissance funding on the museums. It consisted of 5 closed questions and 4 open-ended questions. It was intended that this would enable staff in those museums that have been involved in the Renaissance programme to reflect on its impact and to discuss this together. It was hoped that both education staff and senior management staff would be involved in discussions, but in the event, although almost all responses resulted from discussion, very few senior managers, others than those concerned with education, had been involved.

2.2.6 Three focus groups

It was intended that focus groups would be arranged with teachers with specific types of experience, to include primary teachers using museums for Science, advanced skills teachers, and newly qualified teachers (NQTs). It was hoped that this would provide particular perspectives on the use of museums. Museums participating in the research were asked to help set up and organise these groups. It proved difficult to recruit the specific kinds of teachers originally hoped for, and it became necessary to abandon the more sophisticated approach for a simpler and more pragmatic one. The focus groups were designed to be smaller (with a maximum of ten participants) than the first study so that issues could be explored in greater depth. In the 2003 study teachers described visits and content but were much less able to articulate or analyse the learning that took place in the museum. The teachers in the focus groups in this study were much more articulate and reflective about their pupils' learning; the evidence from the 2003 study was shown to the teachers using the flip-book and teacher testimony from 2003 was also a good catalyst to encourage discussion.

Three focus groups with primary, secondary and special school teachers were carried out in three of the Hubs covered by the evaluation: West Midlands and South West, Phase 1 Hubs and a Phase 2 Hub in the North West. In total the views of 22 teachers were obtained in the focus groups.

Table 2.2.6a: Details of the three focus groups

Date	Hub	Venue	School type	Number of teachers
12/10/2005	West Midlands	Birmingham Museum and Art Gallery	Primary and special	10
13/10/2005	North West	Museum of Science and Industry, Manchester	Secondary	3
20/10/2005	South West	Devon Curriculum Services, Great Moor House, Exeter	Mixed	9

Documentation including interview transcripts, reflections from researchers, post-code analysis of the schools involved and additional context material was gathered as part of the analysis of the focus group discussions.

The focus groups included both experienced and less experienced teachers and produced useful evidence that gave meaning and context to the quantitative data. (Please see Appendix 4 for a list of all participants).

First Focus Group
Venue: Birmingham Museum and Art Gallery, Birmingham
The Birmingham focus group consisted of highly motivated teachers from 9 primary schools and one special school. These teachers represented a mixture of age, experience and ethnicity and were involved in teaching a range of subject areas including History, Geography and Maths. The types of schools represented were diverse including a Catholic primary school and a school with a 96% Muslim population, although all these teachers represented an urban perspective. The teachers at the Birmingham focus group represented schools which were located in very deprived areas. Seven of the ten schools represented here are located in post-code areas which are in the top 10% of deprived areas in England according to the IMD 2004.[50] Issues in relation to ethnicity, socio-economic deprivation, cultural entitlement, aspiration, class mobility and inclusion were a focus for these teachers.

These teachers were in the main very experienced users of museums and other cultural resources. They described using a range of museums and other cultural organisations in a range of ways. They reported using museums at all different times of a term, at different times during teaching a subject- to introduce a topic, to illustrate it in the middle and to conclude a subject area. They reported making use of all the resources museums offered- facilitated sessions, booklets, teaching packs, World Wide Web pages and so forth. They also reported being comfortable undertaking self-led sessions. These teachers were thoughtful about their use of museums and museum provision. In summary, these teachers were confident and motivated users of museums who

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[50] The IMD 2004 measures multiple deprivation at Super Output Area level (SOA) and ranks these from 1 as the most deprived to 32,482 as the least deprived. See section 3.5 for explanation of these terms.

were able to use museums as a resource in many different ways, for many different purposes.

These teachers were sourced for the research by the well established museum education service at Birmingham Museum and Art Gallery which was part of the Phase 1 Hub in the Renaissance programme.

Second focus group
Venue: Museum of Science and Industry, Manchester
It was especially challenging to recruit secondary teachers despite involving several museums in this process including The Museum of Science and Industry, The Whitworth Art Gallery, Manchester Art Gallery and The Manchester Museum. Although numerically small, the North West focus group was very fruitful.

The teachers who participated in the focus group at Manchester were secondary school teachers representing a diversity of perspectives. These teachers taught pupils from a range of socio-economic backgrounds but tending towards socio-economically deprived rather than affluent. One of the schools was located in an area which is in the top 10% of deprived areas in England while the other schools are in the 30-40% category when ranked according to the IMD 2004. Two of the schools were inner city schools; one drew its pupils from a large area whereas the other drew its pupils mostly from its neighbourhood. The latter school was an all-girl's school with a high population of girls from a Muslim background. The third school was located just outside Manchester in a comparatively affluent area. Two of the teachers taught Art and the third was a Science teacher. Like the Birmingham focus group these teachers were very concerned with issues in relation to ethnicity, socio-economic deprivation, cultural entitlement, aspiration, class mobility and inclusion. In addition to this, these teachers were very thoughtful about the impact of museums on their pupils' attitudes and values both in relation to their understanding of contemporary society and their understanding of themselves.

Two of the teachers were very experienced users of museums and cultural resources; the other teacher was fairly new to the use of museums as a resource for teaching. All teachers described using a range of museums in a diversity of ways. Like the Birmingham teachers, these teachers were very reflective about their use of museums and museum provision but possibly due to the small size of the session, we were able to get much more depth and detail about teachers' use of museums and their understanding of their pupils' learning outcomes. These teachers were very confident in describing their use of the full range of museum resources and were also confident about using museums for self-led visits. (The teacher who was new to using museums for teaching was not as confident as the other teachers but nevertheless described using a range of museums in a variety of ways and was very reflective about both her use of museums and museum provision). In summary, these teachers were confident and motivated users of museums who were able to use museums as a resource in many different ways and for many different purposes.

Third focus group
Venue: Devon Curriculum Services, Great Moor House, Exeter
The teachers who participated in this focus group were quite different to the teachers who participated in the groups in Birmingham and Manchester. These teachers were a mix of mostly primary school teachers of History and Art, one secondary school teacher and two special school teachers. The teachers came from schools in areas which were mostly rural in character. The schools represented by teachers in this focus group were from areas of significantly less deprivation than the other focus groups. Six of the nine teachers participating in this group came from schools which were located in areas in the 50-70% category when ranked according to the IMD 2004. The other three schools represented came from areas which were in the 30-40% category according to the IMD 2004. The teachers at this focus group represented a geographical spread across the county and potentially could have represented rural issues in a way that the Birmingham and Manchester focus group did not. However, unlike the Birmingham and Manchester focus groups, and with the exception of one of the special school teachers, issues to do with ethnicity, socio-economic deprivation, cultural entitlement, aspiration, class mobility and inclusion were not points of reference or discussion for these teachers.

On the whole it seemed that these teachers were less experienced and/ or less sophisticated users of museums than the teachers we had experienced in the other two focus groups. While these teachers did mention a range of museums they visited and a range of museum resources they drew on, the dominant description of their purpose for using museums and the impact of museums on their pupils was much more limited. These teachers tended to use museums passively rather than proactively, and this seemed to be because they had a limited understanding of the potential of the museum as a learning resource. The dominant use of museums seemed to be specifically in relation to a topic- to 'do the Romans'- and in this use there was little flexibility. The dominant perception seemed to be that the museum was most useful in the middle of teaching a topic (rather than at the beginning) because you 'don't expect the museum to teach the children'. While these teachers were able to identify a range of museums and museum resources they had used they did not seem to be able to reflect on different types of use and different types of provision from the perspective of impact or quality.

This group of teachers was established for the research through the relatively new museum education service at the Exeter Museum which was part of the Phase 1 Hub in the Renaissance programme.

2.2.7 Three case-studies

It was intended that the case-studies would enable us to consider the potential differences in outcomes in relation to school-museum relationships which are: a) extended over a number of museum sessions, b) involve a school which was a new museum user and c) involve a school which was a regular user of museums with a well-established relationship but which was using the museum for a single session. However, the case-studies also proved difficult to arrange, especially given the time-frame for the research which essentially only permitted case-studies to be carried out during a 2 month period (mid September- mid November 2005). In the event, three case-studies were set up. Two case-studies involved in-depth analysis of two particular KS2 classes and their use of museums and one case-study involved in-depth tracking of a particular KS3 class and their use of a museum. The case-studies were representative of the following perspectives:

- a KS2 class from a deprived urban area with a very multi-ethnic school population visiting a museum for a single visit
- a KS2 class from a deprived urban area (not multi-ethnic) engaging in a longer term (6 week) relationship with a museum service
- a KS3 class from a rural area visiting a museum for a single visit.

Each case-study involved the following:

- observing the class in at least one teaching session in school
- observing the class while on a museum visit
- recording and transcribing interviews with a selection of pupils from the class, the class teacher and, the head teacher, deputy head teacher or other teachers as appropriate
- asking the pupils to fill out a Form B questionnaire immediately after their museum visit and then again on our subsequent visit to the school (a week or up to four weeks later)
- gathering post-codes, IMD 2004 data in relation to deprivation and child poverty, Ofsted Reports (where these were reasonably current), DfES and other available data about the school and its context
- gathering information about the museum.

Table 2.2.7a: Details of case-study visits

Date	Researchers	Venue	Objective
20/09/2005	Jocelyn Dodd Ceri Jones	Wolverhampton Art Gallery	Observed visit by Whitgreave Junior School
04/10/2005	Jocelyn Dodd Lisanne Gibson	Whitgreave Junior School, Wolverhampton	Observation of art session
14/10/2005	Jocelyn Dodd Lisanne Gibson	Blakesley Hall, Birmingham	Observed visit by Yarnfield Primary School
18/10/2005	Jocelyn Dodd	• Wolverhampton Art	• Interviewed

	Lisanne Gibson	Gallery • Whitgreave Junior School	museum staff • Interviewed pupils and teachers
01/11/2005	Lisanne Gibson Ceri Jones	Yarnfield Primary School, Birmingham	Follow up visit to the school– interviewed pupils and teachers
07/11/2005	Jocelyn Dodd Lisanne Gibson	Downham Market High School, Norfolk	Initial visit to the school- interviews with teachers observation of pupils
14/11/2005	Jocelyn Dodd Lisanne Gibson	Roots of Norfolk, Gressenhall	Observation of school visit
21/11/2005	Jocelyn Dodd Lisanne Gibson	Downham Market High School, Norfolk	Follow-up visit to interview pupils Focus group with teachers

Through the IMD 2004 and information about levels of free school meals we can categorise the case-study schools and compare them with schools represented by teachers who filled out Form A. This enables us to understand the case-study schools as representative of particular types of school and their experience of partnerships with museums. The issues raised and examples given by teachers interviewed for the case- studies can be understood as broadly indicative of the range of schools reached in the quantitative research. Thus this evidence goes beyond the anecdotal and can be understood as illustrative of particular types of school and their experience of partnerships with museums. (Please see Appendix 5 for a list of all participants).

First case-study:
Whitgreave Junior School and Wolverhampton Art Gallery
Whitgreave Junior School has 200 pupils aged 7 to 11 years on roll. The school has pupils from disadvantaged backgrounds and poorly performing pupils and was part of the Education Action Zone scheme until January 2005 when this scheme finished; it is now part of the 'Excellence in Cities' scheme.[51] This means the school receives additional resources including extra teaching staff so the teacher-to-pupils ratio is smaller than at other primary schools. Whitgreave Junior School draws its pupils from its local area. The school is located in Low Hill ward which is the second most deprived area of Wolverhampton and in the top 10% of the most deprived areas in England according to the IMD 2004.[52] This is a predominantly white neighbourhood and the school is comparatively ethnically homogeneous with about 10% of pupils from a mixed black heritage. In 2004 15.8% of pupils on roll had SEN and in 2005 no pupils in the school had English as an additional language. The school

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[51] Department for Education and Skills, 2003, *Councillor's Policy Brief*, http://www.standards.dfes.gov.uk/la/CF.POLICY_BRIEF_2003.pdf.
[52] National Statistics, http://neighbourhood.statistics.gov.uk/

has above average figures for pupils receiving free school meals (47%) and attendance is erratic and can be poor. Children come to the school with very low levels of attainment and while they do make some progress at school, levels are generally poor. In 2004 only 47% of pupils in KS2 achieved a 4 or above in English, 54% achieved a 4 or above in Mathematics; however, 85% achieved a 4 or above in Science.[53]

Wolverhampton Art Gallery is part of Wolverhampton Arts and Museums which was part of a Phase 1 Hub in the Renaissance programme. The Gallery runs a programme, 'Creativity in the Curriculum', which funds a museum education officer to follow up a class visit to the museum by going into school for five half days over a number of weeks. The visits are planned to support the school's Art scheme of work and the aim is to leave the school with knowledge or skills that can be used in the future.[54] The programme is as much about the teacher's professional development as it is about the pupils' learning, if not more so. This programme is currently funded by Renaissance funding.

The visit we observed at the museum involved two classes from the school split into two groups which rotated around two sessions; one group was led by an education officer, the other group was taken by an art interpreter. The session was designed to introduce pupils to portraiture and the use of composition skills to portray relationships as part of the Art National Curriculum. In the museum the pupils were introduced to sculpture and paintings of people and invited to guess who might be an appropriate person to insert into the picture, for instance, mother, son and so forth. In the follow-up sessions at the school the focus was on portraiture as it was decided that the pupils may not be capable of undertaking work on relationships. The education officer from Wolverhampton Art Gallery visited the school over a five week period and introduced the pupils to a number of art and craft skills such as sgraffito, press printing, and collage. These activities were chosen in consultation with the class teacher.

The pupils we observed were Year 3, aged between 7 and 8 years. The pupils were placed on four tables in class in relation to their ability levels. We interviewed 4 pupils who represented all ability levels, a equal mix of genders and a diversity of perspectives: one child was from the lowest level of ability table but had gained a lot from the involvement with the museum; another child had a very quiet personality, was from the less than average ability table and had done something very unusual for her self portrait; another child was from the above average ability table and was described by his teacher as 'a bit naughty' but had gained a lot from the interaction with the museum; and the final pupil was from the top level of ability table and was very talkative with the researchers about the work she was doing when they observed the session in class with the museum educator.

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[53] Department for Education and Skills, *DfES School and College Achievement and Attainment Tables*, http://www.dfes.gov.uk/performancetables/

[54] Wolverhampton Arts and Museums, 2005, *Schools Programme, 2005-6,* Wolverhampton Arts and Museums.

Second case-study
Yarnfield Primary School and Blakesley Hall, Birmingham
Yarnfield Primary School is a very large primary school with a nursery which caters for pupils from 3 to 11. In 2005 it had 690 pupils on roll. It draws pupils primarily from its neighbourhood and the radical change in the make-up of the neighbourhood over the past 7 years is reflected in the ethnic characteristics of each school year group, which becomes more ethnically diverse in the younger age-groups. The area is a very deprived and is in the top 10% of most deprived areas in England according to the IMD 2004.[55] In socio-economic terms the area is very similar in profile to that of the Wolverhampton primary school. However, over the last seven years the area has changed from being a primarily white working class neighbourhood to being very multi-ethnic. In 2004 the Fox Hollies ward, where the school is located, had a 17.62% Asian population (the UK average is 4.37%) and a 3.65% Black population (the UK average is 2.19%).[56] Fifty-five percent of the pupils receive free school meals and the school receives special funding from the Children's Fund due to the high incidence of drug abuse and teenage pregnancies in the area. About 25% of the pupils in the school have SEN and the deputy head teacher estimates that a further 15% have learning difficulties due to having English as an additional language. Pupils' level of attainment on entry to school is well below average especially in language and literacy; however, pupils do very well over the course of their attendance at this school. In 2004 65% of KS2 pupils achieved 65% or above in English, 65% achieved level 4 or above in Mathematics and 73% achieved level 4 or above in Science.[57]

Blakesley Hall is a large Tudor timber-framed farmhouse located in the middle of a 1930s housing estate. The schools liaison officer has been organising education programmes there since 1987. This provision is part of the Birmingham Museums and Art Gallery educational service which is a very established, long running and highly organised service. Blakesley Hall offers a facilitated tour of the house and a 'classroom' with pre-organised and self-directed activities for the pupils to do after their tour. These activities make use of the substantial kitchen garden attached to the house and a number of objects that the pupils are introduced to as part of their tour.

The visit we observed involved one KS2 class who were making this visit at the end of a study block on the everyday life of the Tudors, before commencing another block which focused on the Tudors and international exploration, war and trade.

We observed the pupils as a group and noted that the class was very multi-ethnic with a mixture of pupils from Asian, Middle Eastern and Mixed Black heritages. The class represented a range of ability levels and on a subsequent visit to the school we interviewed 6 pupils on the basis of their representation of gender, ability level, experience of museums and likelihood that they might have got a lot out of the visit to Blakesley Hall.

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[55] National Statistics, http://neighbourhood.statistics.gov.uk/
[56] National Statistics, http://neighbourhood.statistics.gov.uk/
[57] Department for Education and Skills, *DfES School and College Achievement and Attainment Tables*, http://www.dfes.gov.uk/performancetables/

Third case-study
Downham Market High School and Roots of Norfolk, Gressenhall, Norfolk

Downham Market High School is a larger than average comprehensive school catering for 11 to 18 year olds. In 2004 it had 1557 pupils on roll and serves the rural area within a radius of 12 miles. It is a popular school and is therefore over-subscribed. The socio-economic and attainment profile of pupils is about average with a below average proportion of pupils with SEN and an above average proportion of pupils with statements of special need.[58] The school and the area are very ethnically homogeneous. West Norfolk and East Downham ward, where the school is located, is 98.48% white, in comparison to 91.31% for England and Wales.

Roots of Norfolk, Gressenhall is part of the Norfolk Museums and Archaeology Service. The museum is housed in a large former workhouse built in 1777. In 2001 after a major refurbishment it was re-opened as the first museum in the country to tell the story of the nineteenth century workhouse and its everyday life. With the launch of Roots of Norfolk, Gressenhall, the education service was re-launched to include live interpretation and theatre in education using actors to play characters that would have occupied or been associated with the Workhouse. This model is based on facilitating peoples' learning at the museum by presenting them with different viewpoints and provoking an emotional response. This model of delivery is very resource-intense and the extra half a staff post which this museum has received as a result of Renaissance funding has given more capacity which has been used to target new groups and extend and broaden the kinds of subject areas that can be covered at the museum. In addition to a large number of KS2 groups the museum also caters for KS3 groups doing History and Geography and A-level groups doing Psychology.

The visit we observed at the museum was designed in a very close partnership between the school and the museum. The model for this visit is now being used by other schools that are adapting it to their particular purposes. The visit was part of a four week focus on the topic of the nineteenth century workhouse and poor laws which is part of the curriculum for KS3. This work was assessed in the form of a written assignment. The visit to Roots of Norfolk, Gressenhall was designed to present the pupils with primary and secondary evidence and different perspectives on the question 'Was the Workhouse So Bad?' which is the title of the assignment the pupils subsequently wrote.

While we observed all the pupils in the groups we followed at the museum (about 40 pupils in all), we followed 13 pupils in particular who were aged between 13 and 14 years. We selected these pupils on our first visit to the school where we observed two classes, one class streamed as average ability and a class in the lowest stream for ability. In these classes we selected pupils representative of both genders in order to get a diversity of perspectives, these were:

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[58] Ofsted, 2004, *Inspection Report, Downham Market High School,*
http://ofsted.gov.uk/reports/121/121210.pdf

- pupils who were most likely to do something unusual for their assignment
- pupils who were most likely to get the most out of a visit to the museum
- a badly behaved pupil who may get a lot out of a museum visit
- a pupil with poor writing but who may get a lot out of a museum visit
- a pupil with good writing but who may get a lot out of a museum visit
- a pupil with SEN

In addition to observing these pupils on their museum visit we also subsequently interviewed them a week after their visit.

2.2.8 Seminars with museums

During the first research study in 2003, the seminars with the museum participants had proved essential in building a research community, in designing the research tools and in reviewing and discussing the emerging research findings. It was therefore decided to repeat these seminars as an integral part of the research design, which stated:

- museum participants in the research would be fully briefed (July 13th 2005) and their views about the research processes considered in the final research design, especially in the design of research tools

- research findings would be explored and discussed by the research team from RCMG, the clients (MLA), and the research participants from the Phase 1 and Phase 2 Hub museums at a research seminar on December 5th 2005, prior to the completion of the final report.

These dates were established as part of the development of the research design. MLA was fully involved in each of the seminars.

The first seminar was held at the Park Crescent Conference Centre in London on July 13th 2005. A representative from each of the museums was invited by MLA to the seminar, and this was positioned as 'essential' to the research. Not all those invited could attend; the seminar included 25 museum participants. Full briefing on the research was given, and some of the findings of the first study were presented. Some of those who had used specific strategies to engage teachers in the research process in 2003 described what these had been. The research tools were explained and reviewed by the participants. Some modifications were discussed, and one or two were accommodated; for example, there was a request to add Information, Communication, Technology (ICT) to the list of skills in Q. 14. The timescale and the various processes were outlined. Follow-up materials were sent to those who could not attend.

The second seminar was held at the Institute of Materials, Minerals and Mining in London on 5th December 2005. Two representatives from each Hub and one representative from each Regional Agency were invited. Numbers were kept relatively small to facilitate in-depth discussion of the emerging findings.

The seminar was attended by 17 museum participants. The opportunity was taken by the research team from RCMG to present and discuss the emerging findings from the research and to explore any issues to arise during the research for the museum participants. (Please see Appendix 6 for list of all participants).

2.3 Conclusion

This is a very large study, involving 69 museums from all 9 museum Hubs, and using a full range of research methods, most of which focus on the pupils' learning outcomes following a museum visit, but which also enable the inclusion of the perspective of the museums in receipt of Renaissance funding. Some changes were made to the research tools, but on the whole, they remained largely the same as in the 2003 study in order to facilitate comparison and to build up a consistent body of data. The research tools have worked well, and together, the range of research methods has produced a very large and useful body of data, which enables confirmation of some of the findings from 2003, while also exposing some of the changes in the relationships between schools and museums.

Some museums struggled with the research, and we did not feel that a research community developed, as it did in the first study in 2003. There may have been a number of reasons for this, including an increase in numbers of participants in the research. In 2003, the research tools were piloted by the lead museums in the Phase 1 Hubs, and the seminar in July involved considerable discussion, followed by some modification, of the research tools, and this may have helped some participants to invest in the research. This did not happen in 2005, as the same tools were used and so it was deemed that piloting was not necessary. There may in addition in 2005 have been issues of difficulty in communicating between Hub leaders and museums in relation to the research processes.

It proved more difficult than expected to arrange case-studies. This was largely because the arrangements could not begin until school visit bookings were in place in September, and all research processes needed to be complete before the middle of November at the latest. This left only a few weeks for the events, one of which was a half-term week. The case-studies involved several visits to schools and museums over a period of weeks, which needed some time to achieve. Arrangements with schools are not always easy to establish as teachers are sometimes hard to get hold of, and plans sometimes change at short notice.

It would have been useful to the research to have been able to identify the issues posed by the quantitative research and then to have designed the generation of qualitative evidence through case-studies and focus groups to explore some of these puzzles, but this would have entailed a longer project. Instead, the research team used the first study in the shaping of the discussions with teachers and pupils, and it became clear that showing teachers some of the data from the first study (statistics, drawings from the flipbook, or quotations) helped them understand what the researchers were looking for, and thus more specific information and examples were given.

The research methods used in this research have produced a very large body of data concerning teachers' use and value of museums, and their views of the learning outcomes of their pupils following a museum visit. Pupils' views have also been gathered.

The report is complex, and requires careful reading because of the comparisons over time (2003 and 2005) and space (Phase 1 and Phase 2 museums), where many small differences are reported, some of which are significant (in statistical terms) and some of which are not.

The report presents the findings from the large 2005 study, and compares these findings with the earlier 2003 study. Comparisons are also made within the 2005 study, with the Phase 1 and Phase 2 museums being reviewed separately and compared. Where comparisons are made between the complete 2005 study and the complete 2003 study, it must be remembered that the 2003 study involved the Phase 1 museums only, while the 2005 study involves both the same Phase 1 museums and also Phase 2 museums.

The report describes school use of museums (Section 3) and then discusses in broad terms how teachers use museums (Section 4). Section 5 discusses in some detail how teachers value museums, considering this carefully in relation to different kinds of use and purpose. Section 6 reviews what teachers think about what their pupils may have learnt while visiting a museum, and Section 7 considers pupils' views of the same thing. Qualitative data and quantitative data are used together in most of these sections, and where possible, illustrations are given. Section 8 reviews the views of museum educators of the importance of the Renaissance programme to their practice. Section 9 outlines the findings, relating them to current government agendas. The Appendices contain details of research tools, museum participants, school case-studies, focus groups, seminar participants, coding categories, and references.

SECTION THREE

SCHOOL VISITS TO MUSEUMS

3.0 Introduction

This section presents information about the schools, teachers, pupils and school-aged children's visits to the 69 museums in this study. In relevant cases, comparisons are made to the data from the first study in 2003.

Form C provided information about the numbers of school-aged children (5-16 years) visiting the 69 museums in September and October 2003-2005. Contacts with school-aged children have increased between 2003 and 2005 for the months of September and October by 40% overall; in the Phase 1 museums by 47% and in the Phase 2 museums by 29% (although the data for Phase 2 museums is incomplete). The increase is variable across the museums, as might be expected.

The section goes on to present the data concerning the use of the 69 museums by schools during the period September and October 2005, using Q.1-9 in Form A. 1,643 usable Form As were returned to RCMG, which, after identifying those that might have been completed by more than one teacher with a single group, represent 1594 distinct museum visits (single visits). Primary schools make the largest number of visits to museums, as in 2003. The pattern of schools using museums is matched to the distribution of schools in England and it is clear that the relative proportions of schools using museums more or less match the relative proportions of schools in England, with the exception of special schools which form a disproportionately large group within the museum audience (12% of the museum audience compared to 5% of schools in England).

As in 2003, the school addresses were analysed according to their post-codes to ascertain to what extent museums were working with schools in areas of high social deprivation. In 2005, in addition, an analysis using free school meals data was carried out. The results of both analyses in 2005 confirm that museums are working with a disproportionately high level of schools located in areas of high deprivation where children may be at risk of social exclusion.

An analysis of the schools involved in focus groups and case-studies shows how these schools follow a similar pattern in relation to indices of deprivation, thus demonstrating a very strong relationship between the quantitative and the qualitative research.

The pupils who completed Form Bs are also discussed. About half of the pupils are visiting the Phase 1 museums and half are visiting the Phase 2 museums, with slightly more girls than boys overall. Comparing the sample of pupils who completed these pupils' questionnaires in 2003, in 2005 there are a significantly higher number of older pupils who have completed the forms.

3.1 Volume of school-aged children visiting or using museums in September and October 2005

Form C provided information about the numbers of school-aged children (5-16 years) visiting museums in September and October 2002–2005. Following advice from MLA, the figures for 2002 were put aside and only the data from 2003-2005 was considered. The categories of use included:

- Visits to Hub museum by school-aged children in educational groups accompanied by teacher(s)
- Visits to the Hub museums by school-aged children with SEN or from SEN schools
- Organised activities at Hub museums involving school-aged children but not visiting with a school e.g. homework clubs, out of school clubs, Brownies
- Outreach activities involving school-aged children which take place in schools (loan boxes count as outreach where facilitated by an education officer or a teacher trained by an education officer)
- Outreach activities not organised by their school but in the context of a youth group or community centre activity.

Not all the museums were able to provide the necessary data and so the data for Phase 2 museums is incomplete. The numerical data has been carefully checked to ensure that the data given to RCMG by the museums has been carefully recorded but it has not been possible to verify the accuracy of the numbers actually provided.

From this information it is possible to see that contacts with school-aged children have increased in both the Phase 1 and Phase 2 museums between 2003 and 2005 for the months of September and October.

Table 3.1a: Total number of school-aged children based on information provided by Phase 1 and Phase 2 museums for September and October 2003-2005

Total each year	2003	2004	2005
Phase 1 museums	72,438	102,247	106,368
Phase 2 museums	45,802	58,763	58,974

Table 3.1b: Number of contacts with school-aged children for the Phase 1 museums, September and October 2003- 2005

Hub	Museum / Museum Service	September				October		
		2003	2004	2005		2003	2004	2005
	Tyne and Wear Museums	3431	5819	7478		7633	10994	13834
	Beamish	4468	6729	5908		6444	7475	9804
	Hartlepool Museums	0	501	187		25	1170	635
North East	The Bowes Museum	208	530	224		569	1201	822
	NE HUB TOTAL	**8107**	**13579**	**13797**		**14671**	**20840**	**25095**
	Bristol's Museums, Galleries and Archives	1516	2204	4055		4978	9247	6841
	Russell-Cotes Art Gallery	36	130	142		115	368	583
	Royal Albert Museum and Art Gallery	831	1060	1779		2359	2816	2047
	Plymouth City Museum and Art Gallery	1218	1997	2640		2721	3120	3546
South West	Royal Cornwall Museum	1072	659	703		1607	1024	1737
	SW HUB TOTAL	**4673**	**6050**	**9319**		**11780**	**16575**	**14754**
	Birmingham City Museums and Art Gallery	2758	7160	5896		3336	10780	8132
	Wolverhampton Art Gallery	756	953	1085		1053	1512	1517
	Ironbridge	7548	6359	5713		13216	11133	9034
	Coventry Arts and Heritage	525	808	1031		1337	1057	2080
West Midlands	Potteries Museums and Art Gallery	824	2814	5049		1854	2627	3866
	WM HUB TOTAL	**12411**	**18094**	**18774**		**20796**	**27109**	**24629**
	Phase 1 museums Total	**25191**	**37723**	**41890**		**47247**	**64524**	**64478**

Table 3.1c: Number of contacts with school-aged children for the Phase 2 museums, September and October 2003– 2005

Hub	Museum / Museum Service	September				October		
		2003	2004	2005		2003	2004	2005
East Midlands	Leicester City Museums	2174	1623	1647		3237	2576	2189
	The Collection, Lincoln	250	425	1233		750	100	438
	EM HUB TOTAL	**2424**	**2048**	**2880**		**3987**	**2676**	**2627**
East of England	Roots of Norfolk	378	456	395		1047	821	1040
	Colchester Castle	4498	5265	5638		7012	7481	7854
	Wardown Park Museum, Luton	683	552	607		969	535	1243
	EE HUB TOTAL	**5559**	**6273**	**6640**		**9028**	**8837**	**10137**
London	Museum of London	1219	2471	3297		4491	10975	9372
	Horniman Museum	1570	1981	2080		3264	3958	**59**
	LO HUB TOTAL	**2789**	**4452**	**5377**		**7755**	**14933**	**9372**
North West	Manchester Art Gallery	296	667	1140		1178	2563	2870
	Bolton Museum and Art Gallery							
	Tullie House Museum and Art Gallery	512	423	327		868	931	1047
	NW HUB TOTAL	**808**	**1090**	**1467**		**2046**	**3494**	**3917**
South East	Milestones, Basingstoke	380	488	290		1496	1388	979
	Brighton Museum and Art Gallery	1925	2066	2075		1857	2137	4045
	SE HUB TOTAL	**2305**	**2554**	**2365**		**3353**	**3525**	**5024**
Yorkshire	York Castle Museum	300	867	603		856	2612	2452
	Ferens Art Gallery	253	64	347		475	316	619
	Leeds Heritage Services	1161	2139	2070		2703	2883	3077
	YO HUB TOTAL	**1714**	**3070**	**3020**		**4034**	**5811**	**6148**
	Phase 2 museums total	**15599**	**19487**	**21749**		**30203**	**39276**	**37225**

[59] Horniman Museum figures for October 2005 (4453) were received after the deadline and so are not included in the total figures.

3.1.1 Increase in contacts with school-aged children for Phase 1 and 2 museums

The DCMS target for Renaissance in the Regions is to increase the number of contacts between children and regional Hub museums by 25% by 2005/6.

What did you learn at the museum today? 2003 study found that based on the figures from the Phase 1 museums between September and October 2002 and 2003 there was an increase in pupil contacts of 28%.

This figure is not directly comparable to the data collected from Form C for the second study. In 2003 Form C was limited to 'pupil' numbers, as opposed to the 2005 data where numbers of 'school-aged children' were collected. The decision was made not to use the figures from 2002.

Using the data supplied to RCMG by the museums involved in the research survey it can be seen that for both the Phase 1 and the Phase 2 museums there has been an impressive increase in the amount of contact with school-aged children between 2003 and 2005.

Overall it can be calculated that the Phase 1 museums have increased their number of contacts with school-aged children for the months of September and October, between the years 2003 and 2005 by 47%. These have increased from 72438 contacts with school-aged children in 2003 to 106368 contacts in 2005, an increase of 33930 overall.

The rate of percentage increase for individual museums is highly variable; see Table 3.1.1a following.

It was more problematic to calculate rates of percentage change for the Phase 2 museums in terms of contact with school-aged children as Bolton Museum's and Horniman Museum's figures for October 2005 were not available.

Overall it can be estimated that the Phase 2 museums have increased their number of contacts with school-aged children for the months of September and October, between the years 2003 and 2005 by 29%. They increased from 45802 contacts with school-aged children in 2003 to 58974 contacts in 2005, an increase of 13172 overall.

Similar to the Phase 1 museums, the rate of percentage increase for individual museums is highly variable; see Table 3.1.1b following.

If the figures for the Phase 1 and 2 museums are combined, the overall percentage increase for September to October 2003– 2005 is estimated at 118240 contacts with school-aged children in 2003 to 165342 contacts in 2005, an increase of 47102 contacts (40%).

Table 3.1.1a: Percentage change in number of contacts with school-aged children for the Phase 1 museums 2003-2005

Museum	Total contacts with school-aged children				Percentage change for each year			Cumulative % change
	2003	2004	2005		2003-2004	2004-2005		2003-2005
Tyne and Wear Museums	11064	16813	21312		52%	27%		93%
Beamish	10912	14204	15712		30%	11%		44%
Hartlepool Museum	25	1671	822		6584%	-51%		3188%
The Bowes Museum	777	1731	1046		123%	-40%		35%
Total	**22778**	**34419**	**38892**		**51%**	**13%**		**71%**
Bristol's Museums and Art Gallery	6494	11451	10896		76%	-5%		68%
Russell-Cotes Art Gallery	151	498	725		230%	46%		380%
Royal Albert Museum	3190	3876	3826		22%	-1%		20%
Plymouth Museum and Art Gallery	3939	5117	5760		30%	13%		46%
Royal Cornwall Museum	2679	1683	1727		-37%	3%		-36%
Total	**16453**	**22625**	**24073**		**38%**	**6%**		**46%**
Birmingham Museums and Art Gallery	6094	17940	14028		194%	-22%		130%
Wolverhampton Art Gallery	1809	2465	2602		36%	6%		44%
Ironbridge Museums Trust	20764	17492	14747		-16%	-16%		-29%
Coventry Museums	1862	1865	3111		0.2%	67%		67%
Potteries Museums and Art Gallery	2678	5441	8915		103%	64%		233%
Total	**33207**	**45203**	**43403**		**36%**	**-4%**		**31%**
Phase 1 museums Total	**72438**	**102247**	**106368**		**41%**	**4%**		**47%**

Table 3.1.1b: Percentage change in number of contacts with school-aged children for the Phase 2 museums 2003-2005

Museum	Total contacts with school-aged children				Percentage change for each year			Cumulative % change
	2003	2004	2005		2003-2004	2004-2005		2003-2005
Leicester Museums	5411	4199	3836		-22%	-9%		-29%
The Collection	1000	525	1671		-48%	218%		67%
Total	**6411**	**4724**	**5507**		**-26%**	**17%**		**-14%**
Roots of Norfolk	1425	1277	1435		-10%	12%		0.7%
Colchester Castle	11510	12746	13492		11%	6%		17%
Luton Museums	1652	1087	1850		-34%	70%		12%
Total	**14587**	**15110**	**16777**		**4%**	**11%**		**15%**
Museum of London	5710	13446	12669		135%	-6%		122%
Horniman Museum	4834	5939	2080[60]		23%	-		-
Total	**10544**	**19385**	**14749**		**84%**	**-**		**-**
Manchester Art Gallery	1474	3230	4010		119%	24%		172%
Bolton Museum	[61]				-	-		-
Tullie House Museum	1380	1354	1374		-2%	1%		-0.4%
Total	**2854**	**4584**	**5384**		**-**	**-**		**-**
Milestones	1876	1876	1269		0	-32%		-32%
Brighton Museum	3782	4203	6120		11%	46%		62%
Total	**5658**	**6079**	**7389**		**7%**	**22%**		**31%**
York Castle	1156	3479	3055		201%	-12%		164%
Ferens Art Gallery	728	380	966		-48%	154%		33%
Leeds Heritage Services	3864	5022	5147		30%	2%		33%
Total	**5748**	**8881**	**9168**		**55%**	**3%**		**59%**
Phase 2 museums total	**45802**	**58763**	**58974**		**28%**	**0.4%**		**29%**

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[60] Incomplete, as figures for October 2005 were unavailable from Horniman Museum.
[61] Figures were unavailable for Bolton Museum.

3.1.2 Using Form C to estimate the number of teachers

In the first study the data from Form C was limited to 'pupil' numbers, as opposed to numbers of 'school-aged children'. It was possible to take the average class size and divide the total number of pupils by this to get a rough estimate of numbers of teachers.[62] In the 2005 study, the category of user for Form C has changed from 'pupil' to 'school-aged children' and this may well include children visiting outside a school context. Accordingly, it is not judged possible in this study to calculate a figure for the numbers of teachers using the museums in September and October 2005.

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[62] During the development of the 2003 study, museums told us they could not provide a figure for the numbers of teachers using their services as this was not recorded.

3.2 Numbers of teachers completing Form A, the Teachers' Questionnaire

The Teachers' Questionnaires (Form A) provide information about the schools using all the museums in the study in September and October 2005. One thousand six-hundred and forty-three (1,643) usable Form As were returned within the time-frame. Not all teachers completed the Teachers' Questionnaire (Form A). Museum education staff told us that it was difficult to get all teachers to agree to complete Form A because:

- they didn't have enough time
- they refused to use time they had paid for to complete a questionnaire
- they had completed a questionnaire in 2003 and could not see why it needed to be done again.

However, a total of 1,643 teachers did complete Form A in September and October 2005 in the 69 museums. This can be compared with a total of 936 teachers completing Form A in the same time period in 2003, when only the Phase 1 museums were involved. In 2005, 782 teachers completed Form A in the Phase 1 museums, and 861 teachers completed Form A in the Phase 2 museums.

Table 3.2a: All teachers completing Form A in 2005/2003 by Phase 1 and 2 museums

	2003	2005
All teachers	936	1,643
All Phase 1 teachers	936	782
All Phase 2 teachers	n/a	861

3.2.1 The teachers completing Form A in each of the Hubs

Teachers completing Form A in each of the Hubs are shown below.

Fig 3.2.1a: Proportions of teachers completing Form A by Hub, 2005

	Missing	East Midlands	South West	South East	North West	East of England	Yorkshire	London	North East	West Midlands
☐ Hubs	0%	5%	7%	7%	9%	9%	9%	13%	15%	26%
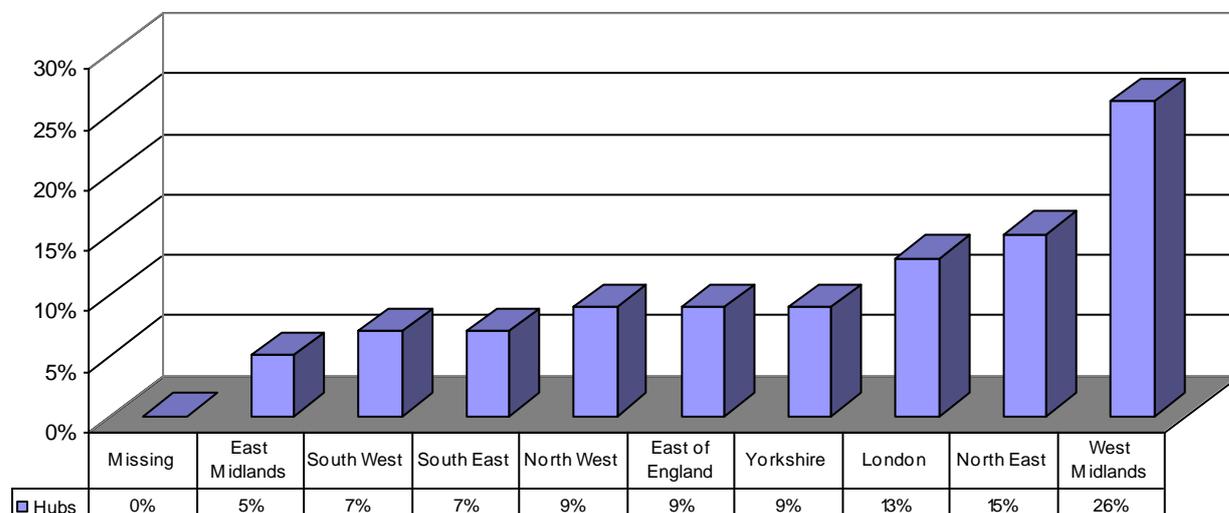
Base: all teachers completing Form A, 2005 (1632)

In the first study in 2003, when the teachers in the Phase 1 Hubs were considered according to numbers of teachers responding in each Hub, it became clear that more teachers had responded in the West Midlands (44%) than in the North East (32%) or in the South West (24%). Of the 936 teachers, 417 were from schools in the West Midlands, 220 from schools in the South West and 299 from schools in the North East. This can be compared to the returns from the three Phase 1 Hubs in 2005, which show the West Midlands still providing the largest number of returns from teachers, with the North East's responses remaining at almost the same level and the South West decreasing by 9%.

Fig 3.2.1b: Teachers completing Form A in the Phase 1 Hubs, 2003

South West 24%

West Midlands 44%

North East 32%
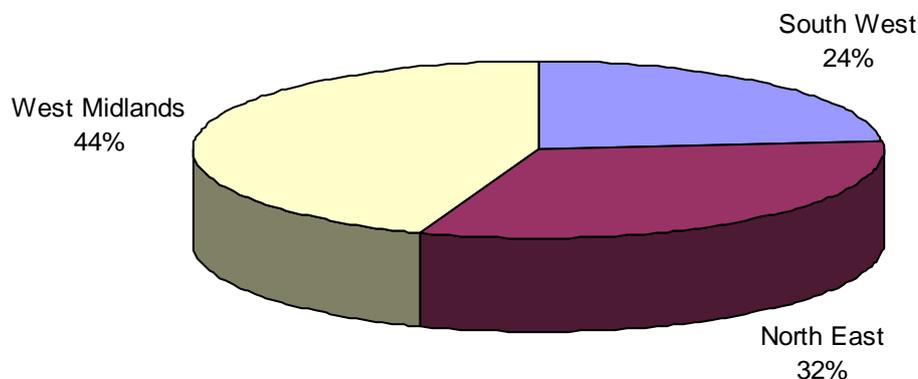
Base: all teachers completing Form A, 2003 (936)

58

Fig 3.2.1c: Teachers completing Form A in the Phase 1 Hubs, 2005
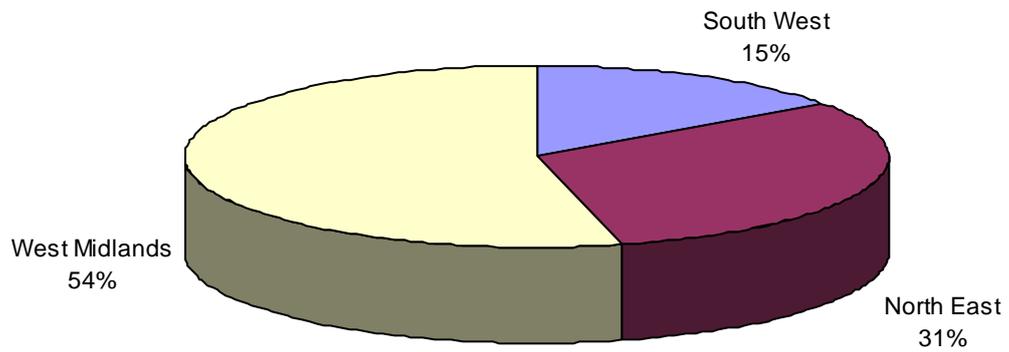
Base: all teachers completing Form A, in Phase 1 museums, 2005 (782)

3.3 The schools using the 69 museums - the number of 'single visits'

 The first part of the questionnaire contained nine questions about the school and the museum visit.

Form A, Q.6-9 asked teachers about the numbers of classes, pupils, teachers and accompanying adults visiting the museum on that day. The returns were scrutinised to take out any that might lead to any double-counting, by checking the museum, date, theme, school and year-group data. Where it was thought that there might be a possibility of more than one teacher accompanying a single group and completing a questionnaire, only one of the relevant questionnaires was used for this part of the analysis. (All Teachers' Questionnaires were, however, included for the rest of the analysis). The number of 'single visits' were calculated on this basis. From the 1,643 forms returned, 1,594 single visits have been identified. This data was then further reviewed to provide a new category - single visits by schools - to allow us to analyse Q.8: 'teachers visiting from the school today' and Q.9: 'total number of accompanying adults with your school'. School visits were calculated by removing multiple visits by a school to the same museum on the same day.

In the table below, the total numbers of pupils, teachers and accompanying adults are based on 1,594 single visits. Number of children in 2005 was calculated using the school visits dataset according to an average class, as teachers' responses to Q.7: 'How many pupils in each class' proved unreliable. Average class size was worked out by removing any class with over 40 pupils as this was assumed to be due to teachers completing the question incorrectly. In order to check that removing these cases did not seriously skew the analysis the mean class size was checked with and without these cases. Removing these cases made very little difference to mean class size which was calculated as 25.67 with all cases included and 24.84 when classes with over 40 pupils were removed. The average class size was then multiplied by Q.6: 'How many classes from your school are visiting this museum today?' to work out the number of children visiting.

Table 3.3a: Form A, Q.6, 7, 8, 9: 'How many classes from your school are visiting this museum today?', 'How many pupils in each class?', 'How many teachers are at the museum today from your school?', 'What is the total number of accompanying adults with your school (excluding teachers)?', 2005

	Number of children	Number of accompanying teachers[63]	Number of accompanying adults
TOTAL	36,489	2594	4833

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[63] The number of teachers here is the number of teachers who were involved in the completion of Form A (teachers extra to those completing the Teachers' Questionnaire, Form A).

The comparative figures from 2003 are shown below.

Table 3.3b: Form A, Q.8, 9, 10: 'Total number of pupils in the visiting group?', 'Total number of teachers accompanying the visiting group?', 'Total number of accompanying adults with the group?', 2003

	Number of children	Number of accompanying teachers[64]	Number of accompanying adults
TOTAL	27, 273	1613	2883

Base: 843 teachers

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[64] The number of teachers here is the number of teachers who were involved in the completion of Form A (teachers extra to those completing the Teachers' Questionnaire, Form A).

3.4 The schools using the 69 museums - the types of school

When a comparison is made of the types of schools using museums in the first study (2003) and this study (2005), the results are remarkably consistent. The vast bulk of school visits are made by primary schools, with far fewer visits made by secondary schools. There are surprisingly few visits made by private schools. The 'other' category includes, for instance, home schoolers and Brownies. Where the figures vary from those in 2003, these variations are significant.[65] Thus the number of secondary schools in this sample involving 69 Phase 1 and Phase 2 museums is slightly smaller than the number visiting the Phase 1 museums in 2003 (10% compared with 13%), and the percentage of primary schools is correspondingly larger in 2005.

However, this collective figure does mask some considerable regional differences which are made clear when the 2005 data is broken down into figures for each Hub (Figure 3.4e below).

Fig 3.4a: Form A, Q.5: 'Type of school', by single visit, 2005

	Primary	Middle	Secondary	Special	Private	Other	Non-UK	Missing
Number of Single Visits	81%	2%	10%	2%	3%	2%	0%	0%
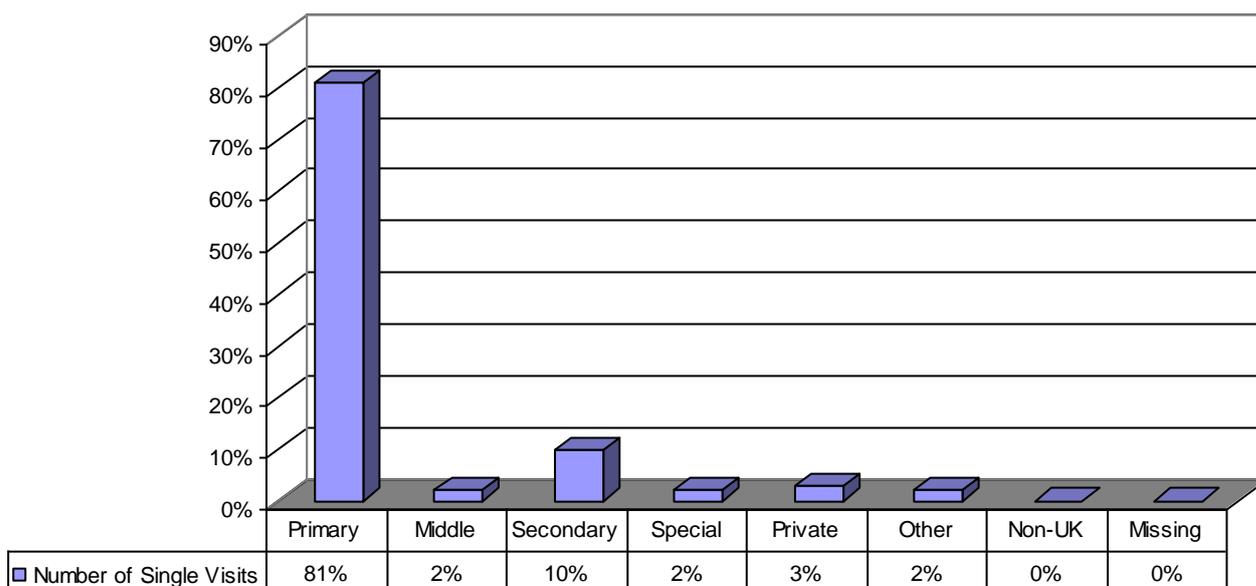
Base: all teachers' responses Q.5: 'Type of school', 2005 (1594)

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[65] There is a significant difference in school type between 2003 and 2005 ('missing' and 'Non-UK schools' excluded). Chi square (degrees of freedom 5, n=2409)= 22.1, p ≤ 0.001 (<0.05).

Fig 3.4b: Form A, Q.6: 'Type of school', single visits, 2003

	Primary (including Nusery)	Middle School	Secondary School College	Special School	Private School	Other Schools	Not Stated
☐ Number of Single Visits	78%	3%	13%	2%	1%	1%	3%
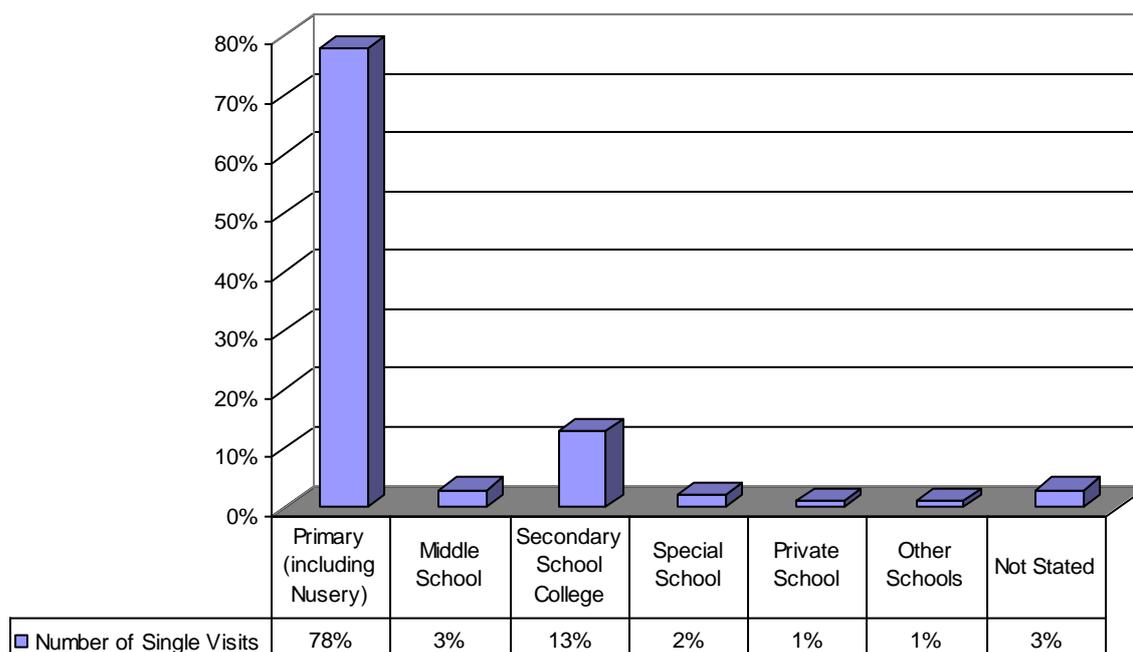
Base: all teachers' responses Q.6: 'Type of school', 2003 (843)

There is some difference in the composition of school type visiting museums between the Phase1 and Phase 2 museums. The percentage of primary schools visiting museums in this study remains the same in both Phase 1 and Phase 2 museums, but secondary schools make up a slightly smaller portion of schools using museums in Phase 2 museums. While this difference is small at 3% it is statistically significant.[66]

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[66] There is a significant difference in school type by Phase 1 and Phase 2 museums in 2005 ('missing' excluded). Chi square (degrees of freedom 6, n= 1590)= 19.17, p ≤ 0.01 (<0.05).

Fig 3.4c: Form A, Q.5: 'Type of school' by Phase 1 museums, single visits, 2005

	Primary	Middle	Secondary	Special	Private	Other	Non-UK	Missing
☐ Number of Single Visits	80%	1%	12%	2%	2%	2%	1%	0%
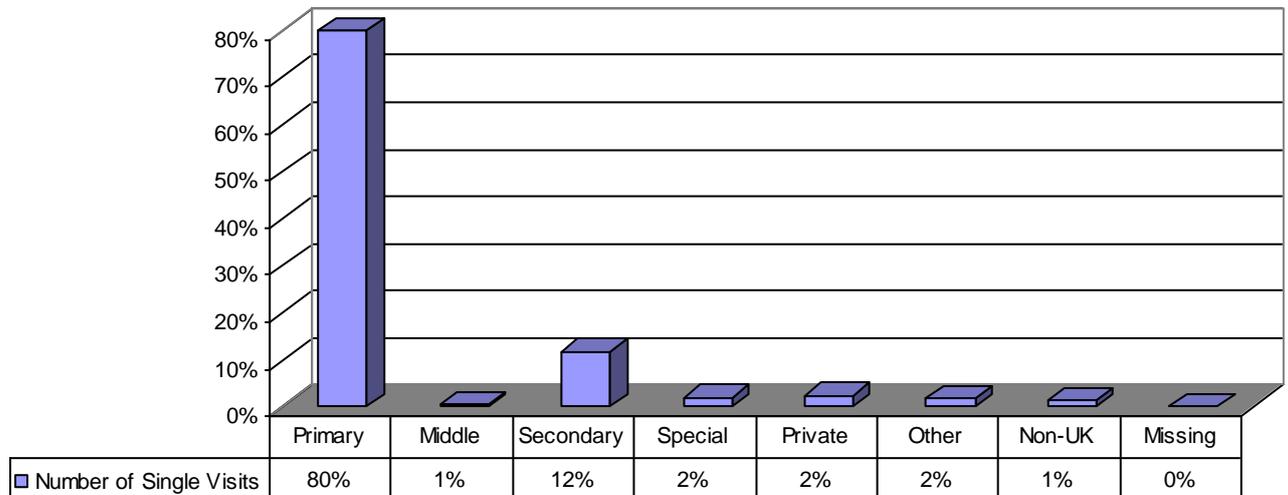
Base: all teachers' responses Q.5: 'Type of school' in Phase1 museums (747)

Fig 3.4d: Form A, Q.5: 'Type of school' by Phase 2 museums, single visits, 2005

	Primary	Middle	Secondary	Special	Private	Other	Non-UK	Missing
☐ Number of Single Visits	80%	3%	9%	2%	3%	3%	0%	0%
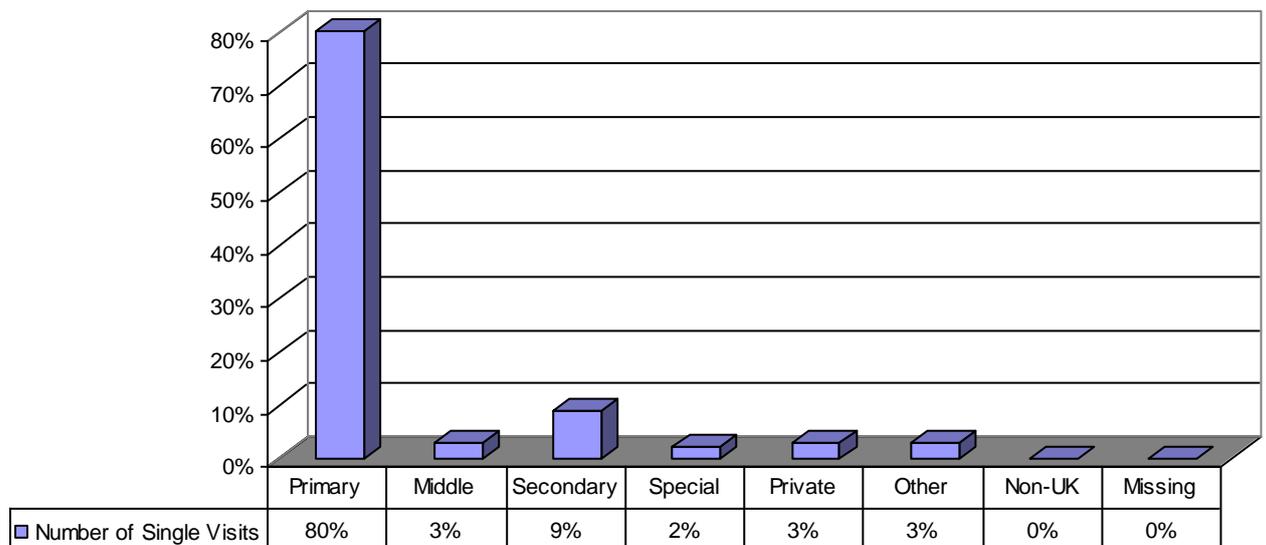
Base: all teachers' responses Q.5: 'Type of school' in Phase 2 museums (844)

Fig 3.4e: Form A, Q.5: 'Type of school' considered by Hub, single visits, 2005

	West Midlands	East Midlands	East of England	London	North East	North West	South East	South West	Yorkshire
□Missing	0%	0%	0%	0%	0%	0%	0%	0%	1%
■Non-UK	0%	0%	0%	0%	0%	0%	0%	0%	3%
□Other	2%	3%	3%	1%	3%	1%	6%	2%	4%
■Private	3%	2%	3%	5%	1%	1%	3%	4%	0%
□Special	3%	2%	3%	4%	3%	0%	1%	0%	1%
□Secondary	12%	2%	9%	9%	9%	7%	3%	19%	18%
■Middle	0%	6%	4%	0%	2%	0%	11%	0%	1%
■Primary	81%	84%	78%	80%	83%	91%	76%	75%	73%
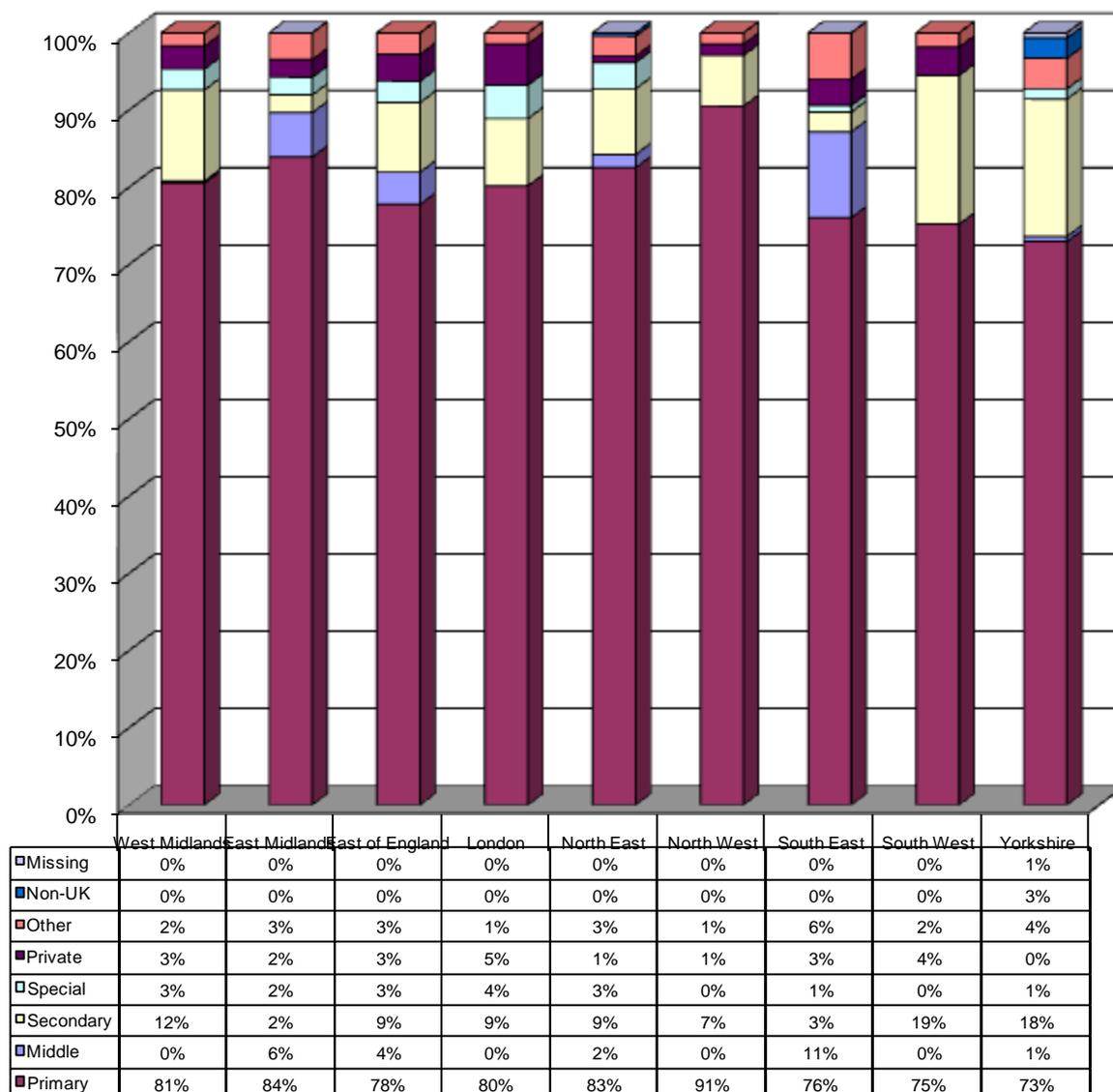
Base: all teachers' responses Q.5: 'Type of school' (1594)

Breaking down the figures in relation to the regional Hubs, shows some interesting variations. As with the other comparisons by type of school, primary schools still remain the principle users, making up between 73% and 91% of museum users. Secondary schools are the second largest group of museum users in the majority of Hubs, with particularly high numbers in the South West and Yorkshire compared with the other regions. 'Other' refers to home schoolers and similar groups.

3.5 Matching the proportion of school types in this study with the national breakdown of schools by type

From the DfES, *School and Pupils in England January 2005* data,[67] actual numbers of the different types of schools in England can be ascertained. This gives the proportions of the various different types of school in England as percentages of the total number of establishments as follows:

Table 3.5a: Total number of schools in England, 2005

2005	Primary	Secondary including City Technology Colleges & Academies	Special	Independent	Total
Number	17,642	3,416	1,122	2,250	24,430[68]
Percentage	72%	14%	5%	9%	100%

The schools in this research study (2005) were coded in a slightly different way to the DfES, *School and Pupils in England January 2005* data.[69] Nevertheless, it is possible to use the DfES data to consider in broad terms the proportions of primary and secondary schools that museums reached during the research period and to compare these to the overall breakdown of school types in England. The figures used are based on the number of teachers responding to Q.5: 'Type of school' which uses the 'single visit' figures to avoid counting school visits more than once. Figure 3.5b below compares school visits to the 69 museums with the distribution of types of schools in England.

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[67] Department for Education and Skills, 2005, Schools and Pupils in England: January 2005 (Final), http://www.dfes.gov.uk/rsgateway/DB/SFR/s000606/index.shtml
[68] Figures exclude nursery schools and pupil referral units.
[69] For example, in the DfES study, middle schools have not been included in a separate category, as we did in this study, but included where appropriate with primary or secondary schools.

Fig 3.5b: The distribution of types of schools in England according to the DfES, *School and Pupils in England January 2005,* **data matched against school visits to the 69 museums in this study, 2005**

	Primary	Middle	Secondary	Special	Independent (Private)	Other
■ All schools in England	72%	0%	14%	5%	9%	0%
■ School use of museums (2005)	81%	2%	10%	2%	3%	2%
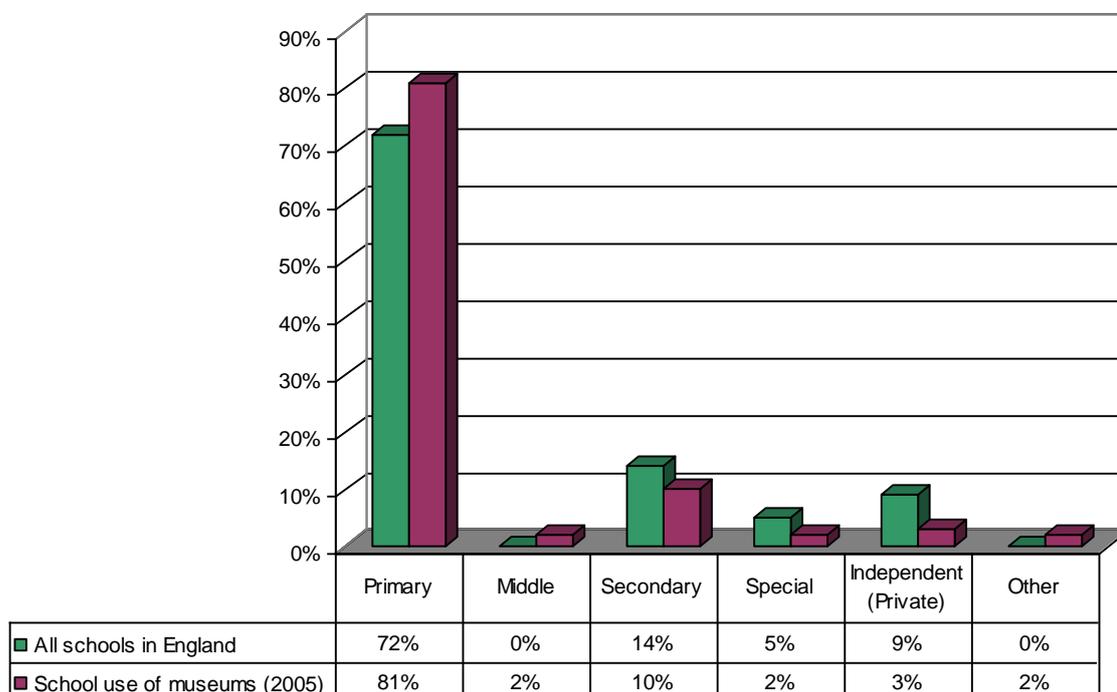
Base: all schools in England (24,430); all teachers answering Q.5: 'Type of school' 2005 (1594)

Another way to consider this issue is to compare the actual schools visiting the 69 museums, looking at schools rather than school visits. In order to do this, we recoded the schools which the teachers who completed Form As came from to match the coding used by the DfES more closely. Middle schools were split 50/50 into the primary and secondary categories, and special schools were considered as a separate category, where previously we had added them to either the primary or secondary categories if this was indicated by the teacher completing the questionnaire. We removed any non-UK schools and any entries in the 'other' category.

Fig 3.5c: The distribution of types of schools in England according to the DfES, *School and Pupils in England January 2005*, **data matched against the schools visiting the 69 museums in this study, 2005**

	Primary	Secondary	Special	Independent (private)
■ All schools in England	72%	14%	5%	9%
■ School use of museums (2005)	69%	12%	12%	6%
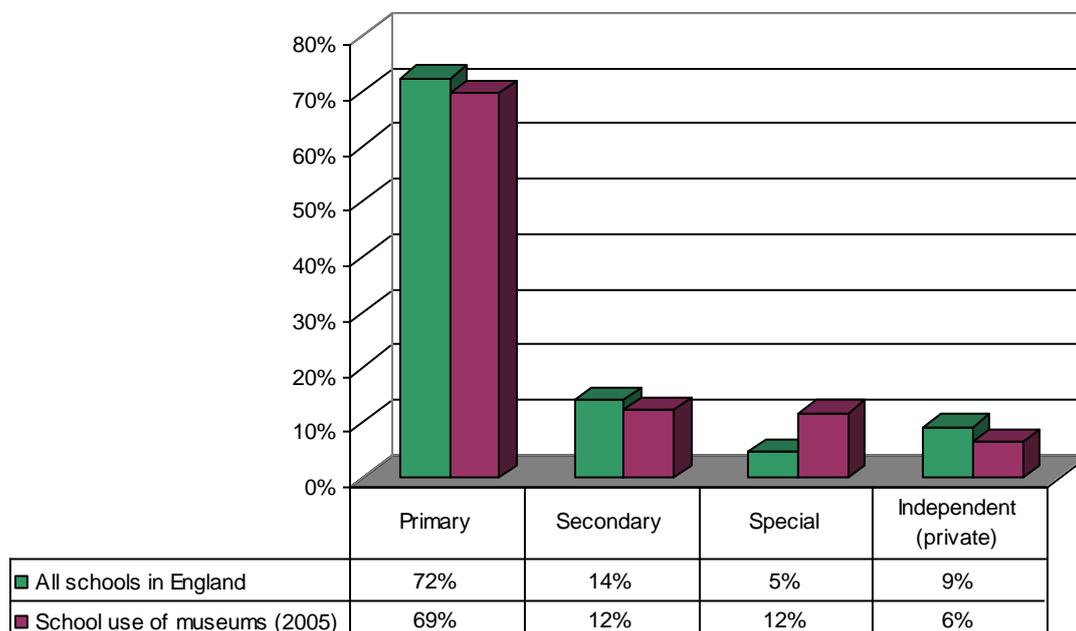
Base: all schools in England (24,430); all teachers answering Q.5: 'Type of school', 'non-UK' and 'other' categories excluded, 2005 (835)

In both comparisons, primary schools emerge as the largest category of school users of museums, and comparing the percentages in the two graphs, it can be seen that many primary schools make repeat visits. Secondary schools are very well represented as users of these 69 museums in relation to their numbers in England, possibly rather better than is customarily believed. Special schools figure much more highly in the museum sample than they do in the national figures, reflecting a very high level of use by schools in this category.

3.6 Where did the schools come from? What do the post-codes tell us?

What did you learn at the museum today? 2003 addressed the issue of social exclusion through an evaluation of the extent to which museums were attracting visits from schools located in areas with differing levels of social deprivation. Drawing on the DETR[70] IMD 2000, the research revealed that a surprisingly high percentage of schools were located in wards classified as highly deprived. Forty-six percent of visits were made from schools located in the 20% most deprived wards in England.

3.6.1 *What did you learn at the museum today?* Second study 2005

Since 2003, new indices of multiple deprivation have been compiled by the Social Disadvantage Research Centre at the University of Oxford for the Office of the Deputy Prime Minister. The Indices of Multiple Deprivation 2004 (IMD 2004), like the IMD 2000, is a composite index derived from a series of other indices. The 2004 indices adopt the same approach and methodology employed in the DETR IMD 2000 but through using up to date information, largely from the 2001 Census, and incorporating additional resources.

The conceptual framework of the IMD 2004 is based on the premise that deprivation is ultimately experienced by individuals. For the IMD 2004 there are seven sub-indices which relate to:

- Income
- Employment
- Health and disability
- Education, skills and training
- Barriers to housing and services
- Living environment
- Crime.

Unlike the IMD 2000, which measured deprivation at ward level, the IMD 2004 measures multiple deprivation at Super Output Area level (SOA). SOAs are aggregates of Census output areas with units of, on average, 1500 individuals. The intent is to identify smaller pockets of deprivation that might otherwise be hidden at ward level .[71]

The advantage is that a more spatially fine grained dataset like the SOAs will provide a more consistent basis for the output of socio-demographic information than provided by the use of electoral wards, which varied considerably in size, area, extent and population size.[72]

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[70] Former Department for Environment, Transport and the Regions.

[71] Neighbourhood Renewal Unit, 2004, *The English Indices of Deprivation 2004: Report to the Office of the Deputy Prime Minister*, Stationary Office, London.

[72] See p.107 in Hooper-Greenhill, E., Dodd, J., Phillips, M., O'Riain, H., Jones, C., and Woodward, J., 2004, *Inspiration, Identity, Learning: The Value of Museums, The evaluation of the impact of DCMS/DfES Strategic Commissioning 2003-2004: National/Regional Museum Education Partnerships,* DCMS and RCMG, University of Leicester, http://www.le.ac.uk/museumstudies/rcmg/rcmg.htm

However the dataset provided by the IMD 2004 is not unproblematic. Social exclusion and deprivation are multi-dimensional problems which even multiple criteria indices may fail to represent adequately.

A further issue is that the levels of deprivation indicated by the school's post-code may not necessarily represent the levels of deprivation experienced by the pupils themselves. Schools do not always draw their pupils in from the immediate area and their catchment area may in fact extend over multiple SOAs. This is felt to be particularly problematic for independent schools, secondary schools, rural schools and other schools where pupils may have to travel. However it was not possible in the timeframe of the research to investigate the catchment area of the schools involved so the decision was made to include all possible schools within the data. It was agreed to also categorise schools in relation to the percentage of pupils known to be eligible for free school meals in order to further understand the relationship between school post-code and deprivation experienced by individual pupils.

A similar analysis was therefore conducted with regard to school visits in September and October 2005. The post-code data collected during 2003 was also re-categorised using the IMD 2004 in order to enable a direct comparison to be made between the two studies.

3.6.2 Using the data from Form A

The teachers were asked to complete the names and addresses of their schools on Form A.

For the purposes of the research we were granted access, through MLA, to a database of schools complied by DfES.[73] This database is compiled of the following information for each individual school:

- LEA number
- Full school address
- Number and percentage of pupils known to be eligible for free school meals
- Number of pupils on roll
- IMD 2004 rank.

It enabled the matching of data from Form A to the DfES database where school post-codes were complete or matched those given on the database.

Where post-codes or addresses were missing or incomplete, systematic searches of the DfES database and Internet resources were undertaken to confirm school names and addresses. Despite this not all the schools were able to be matched to their IMD 2004 rank and some were therefore excluded. The restriction of the IMD 2004 data to England necessitated the

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[73] Made available by Nicky Morgan, Strategic Commissioning National Project Manager.

removal of schools from Scotland, Wales and overseas, along with entries that did not conform to the single visit criteria.

In total, from 1594 single visits we were able to match the IMD 2004 rank to the post-codes of 1584 schools. For the IMD 2004, the more deprived a ward the lower its ranking. The most deprived ward in England is given a rank of 1 and the least deprived ward a rank of 32,482.

From an analysis of the post-codes of the schools, where each IMD 2004 rank was categorised according to rank[74] and presented below, it can be ascertained where the schools come from in relation to indices of deprivation.

Fig 3.6.2a: Form A, Percentages of class visits ranked by IMD 2004, SOA rankings, from top 10% most deprived to bottom 10% least deprived, 2005

	Top 10%	10-20%	20-30%	30-40%	40-50%	50-60%	60-70%	70-80%	80-90%	Bottom 10%
% of postcodes	19.1%	13.1%	9.4%	9.0%	9.0%	8.8%	10.7%	6.1%	7.9%	7.0%
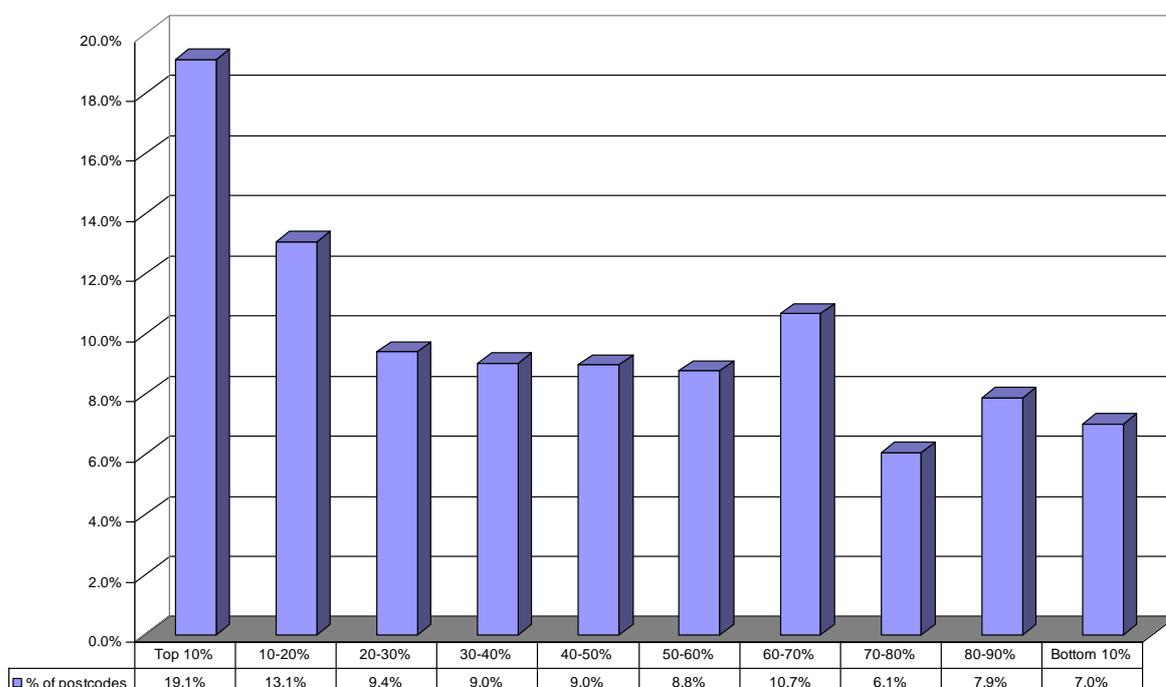
Base: all post-codes fitting the criteria described, 2005 (1584)

Schools visiting Phase 1 and Phase 2 museums during the research period are located in areas that experience a range of deprivation. The most deprived SOA included in the analysis was ranked 2 out of 32,482 (in Monsall, Manchester) and the least deprived was ranked 32, 458 out of 32,482 (in Saffron Walden, Essex).

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[74] Categories of 10% were defined from 1 to 32, 482 and each IMD 2004 rank was allocated to a category. Top 10% refers to the SOAs that are ranked the most deprived in England and bottom 10% refers to those ranked least deprived.

Nineteen percent of recorded single visits came from SOAs classified as being amongst the 10% most deprived in England, and 32% of the visits were made by schools located in the 20% most deprived SOAs in England.

3.6.3 Re-categorising the 2003 data

The data from 2003 was re-categorised for this study using the IMD 2004 to enable direct comparisons with the 2005 data.[75] During this re-categorisation it was found that not all the post-codes that could be ranked using the IMD 2000 were able to be categorised using the IMD 2004. This was due to differences in the criteria used to calculate the different indices of deprivation and issues with linking some of the post-codes to their relevant SOA. Therefore the proportions of post-codes used for the IMD 2000 and IMD 2004 are not directly comparable, although this should not affect the comparison with the 2005 data.

When comparing the 2003 data (Fig 3.6.3a) with the 2005 data (Fig 3.6.2a above) there is a remarkable similarity in terms of proportions of schools from areas of high deprivation making visits to museums. This is particularly noticeable amongst schools visiting from the Top 10% and the 10-20% most deprived SOAs.

Fig 3.6.3a: Form A, Percentages of class visits ranked by IMD 2004, SOA rankings, from top 10% most deprived to bottom 10% least deprived, 2003

	Top 10%	10-20%	20-30%	30-40%	40-50%	50-60%	60-70%	70-80%	80-90%	Bottom 10%
% of postcodes	20.6%	13.9%	9.8%	10.2%	8.4%	9.3%	9.3%	8.3%	6.3%	3.8%
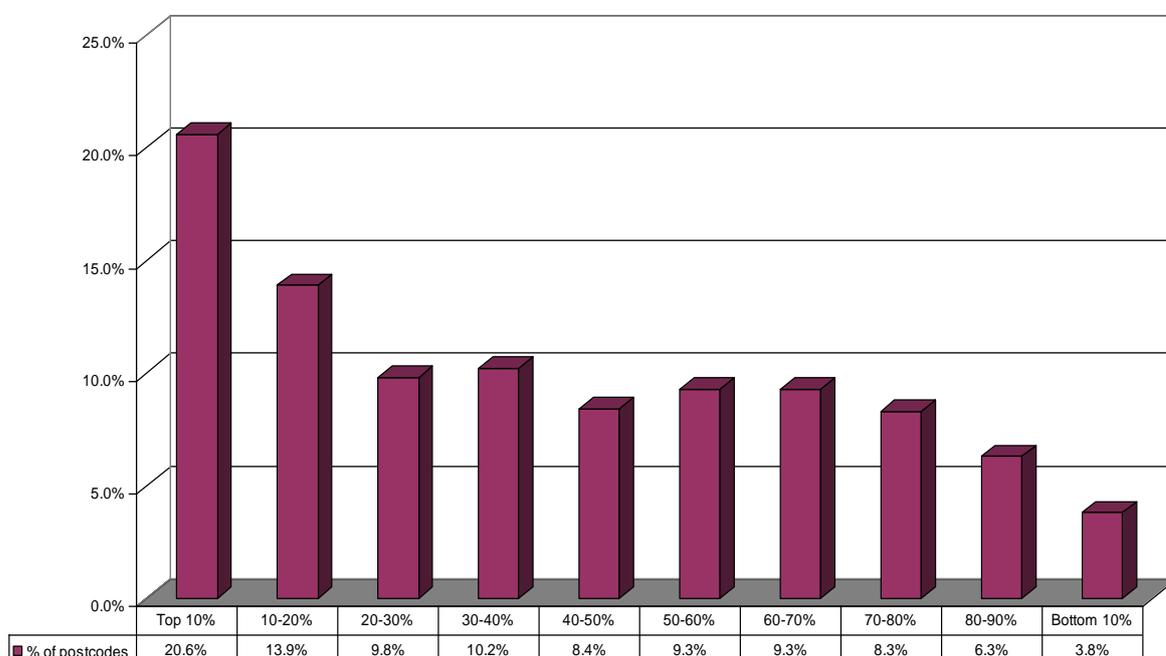
Base: all post-codes fitting the criteria, 2003 (664)

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[75] The 2003 data was originally categorised using the IMD 2000 which considered deprivation at Ward rather than SOA level.

Museums are continuing to reach a considerable number of pupils who are experiencing social deprivation and in similar proportions in 2005 to 2003.

3.6.4 Free school meals

As outlined above, it may be considered that the levels of deprivation indicated by the school's post-code may not necessarily represent the levels of deprivation experienced by the pupils themselves. The IMD 2004 is an aerial measure, being produced as a weighted area level aggregation of measures related to individuals inhabiting a delimited area in the 2001 Census. Such measures should not be seen to characterise all individuals within an area (an error commonly described as the 'ecological fallacy'), and it is also important to recognise potential incongruities between a school's location and the social circumstances of its pupils. A school might be located in an area classified as deprived but this does not mean all children attending the school from this area will come from deprived households and indeed a school's effective 'catchment area' may encompass very little of the designated area of deprivation and instead extend into adjacent areas where indices of deprivation are very low. For such reasons, a pupil-centred indicator of social deprivation is often seen to be preferable over aerial-based deprivation indices.

Access to the DfES database allowed us to address this issue via records of the proportion of pupils eligible for free school meals. The distribution of pupils eligible is highly skewed, with large numbers of schools containing very low percentages of pupils eligible for free school meals, while a small number of schools have very high numbers of eligible pupils. To take account of this distribution, it was decided to classify schools appearing in the survey according to their positions within 'quartiles' within the national distribution as calculated from the DfES database.

Table 3.6.4a: Percentage of school visits ranked by DfES national quartiles for range of pupils (%) eligible for free school meals

National quartile	Range of % of pupils known to be eligible for free school meals	Number of school visits to museums	% of school visits
First	0 – 4.6	287	19.9
Second	4.7 - 10.9	319	22.1
Third	11.0 – 24.2	287	19.9
Fourth	24.3-100	548	38.0

Base: single school visits to museums, 2005 (1441)

Fig 3.6.4b: Percentage of school visits ranked by DfES national quartiles for range of pupils (%) eligible for free school meals

	First quartile	Second quartile	Third quartile	Fourth quartile
% of school visits	19.9%	22.1%	19.9%	38.0%
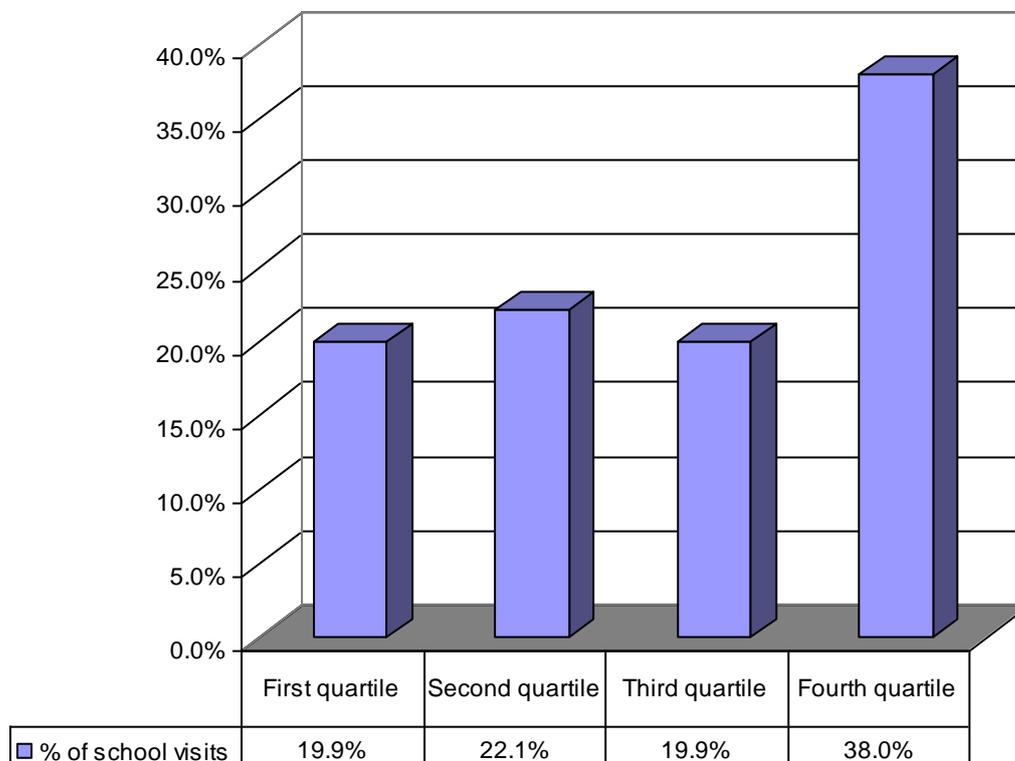
Base: single school visits to museums, 2005 (1441)

Given that the boundaries of the national quartiles are set to each encompass a quarter of schools, it can be seen that the schools in the survey are drawn disproportionately from schools in the upper most quartile (38%). This would seem to confirm the findings of the post-code analysis that museums are attracting visits from schools serving children from more socially deprived circumstances.

3.6.5 Comparing the schools in the focus groups and case-studies with all schools in the sample, 2005

A direct comparison can also be made for the schools whose teachers participated in the focus groups and case-study visits, showing in greater detail the relationship between IMD 2004 rank and percentage of pupils known to be eligible for free school meals.

Table 3.6.5a: Schools that participated in the focus groups and case-studies showing a comparison of percentage of pupils known to be eligible for free school meals and the IMD 2004 rank based on the school post-code

School	% pupils known to be eligible for free school meals	IMD 2004 rank	Focus group / case-study
Bickleigh on Exe Primary	3.9	18,586	Exeter
Sandford School	5.8	17,080	Exeter
Downham Market High School	7.8	19,769	Norfolk
Kentisbeare Primary School	7.9	20,852	Exeter
Budleigh Salterton Primary School	8.6	19,400	Exeter
Clyst Honiton Primary School	10.9	21,468	Exeter
Okehampton Primary School	14.7	12,050	Exeter
Millwater School	18.7	21,897	Exeter
St Gabriel's Roman Catholic High School	19.2	11,596	Manchester
Trinity Church of England High School	20.2	3110	Manchester
Levenshulme High School	21.4	12,340	Manchester
Lampard Community School	22.4	11,402	Exeter
St Cuthbert Mayne Secondary School	22.6	11,628	Exeter
St Cuthbert's Catholic Primary School	23.2	699	Birmingham
Canterbury Cross Primary School	28.4	990	Birmingham
Bells Farm Junior School	38.5	3788	Birmingham
Springfield Primary School	38.8	4380	Birmingham
Uffculme (Special) School	39.1	12,793	Birmingham
Yarnfield Primary	43.3	4,187	Birmingham
St Thomas More Catholic Primary School	47.8	215	Birmingham
Whitgreave Junior School	49.5	906	Wolverhampton
Chivenor Junior School	55.1	2259	Birmingham
Brookfields Primary School	57.1	283	Birmingham
Aston Tower Community Primary School	60.6	786	Birmingham
Mansfield Green Primary School	65.9	1005	Birmingham

Following Table 3.6.5a, it does appear that the schools with the IMD 2004 rank that indicate significant deprivation do tend towards a higher percentage of pupils known to be eligible for free school meals.

Based on the national quartiles, 11 of the 25 schools listed (44%) can be categorised in the fourth quartile, very similar to the pattern identified in the overall research.

From this data it can be seen that using the post-code as an analysis for experience of deprivation is fairly reliable, although the percentage of pupils eligible for free school meals makes the case stronger.

3.7 Key Stages of pupils from Form A

Form A gives us information on the pupils that are accompanying the teachers on the visits to the 69 museums.

In response to Q.10: 'Years of pupils in this class', it can be seen that 87% of pupils fell into the KS2 and below band, and 13% of pupils fell into the KS3 and above band.

There has been very little change to the pupil profile since 2003.

Fig 3.7a: Form A, Q.10: 'Years of pupils in this class', 2005
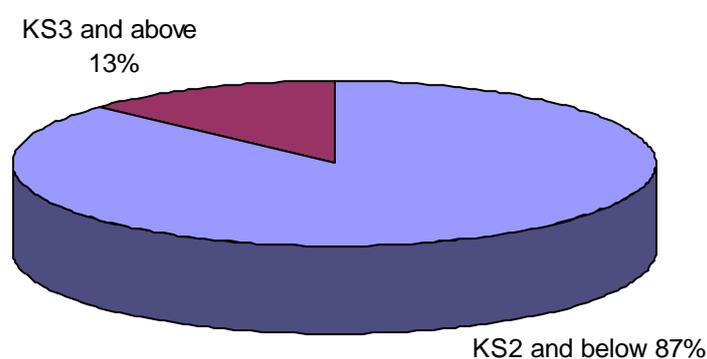
Base: all teachers' responses, Q.10: 'Years of pupils in this class', excludes 'missing' and mixed Key Stages, 2005 (1597)

In the first study in 2003, 86% of pupils fell into KS2 and below, while 14% of pupils fell into the higher age-band of KS3 and above.

Fig 3.7b: Form A, Q.6: 'Type of school', 2003
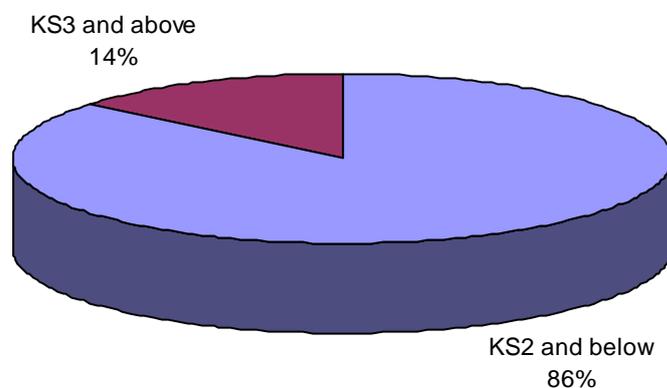
Base: all teachers based on Q.6: 'Type of school' excluding those bringing classes from middle schools, and special or private schools who did not otherwise indicate age range, 'missing' excluded, 2003 (766)

Comparing the relative proportions of pupils in the Phase 1 and the Phase 2 museums using the Form A data, no statistically significant[76] difference is found.

Fig 3.7c: Form A, Q.10: Pupils visiting Phase 1 museums by Key Stage, 2005
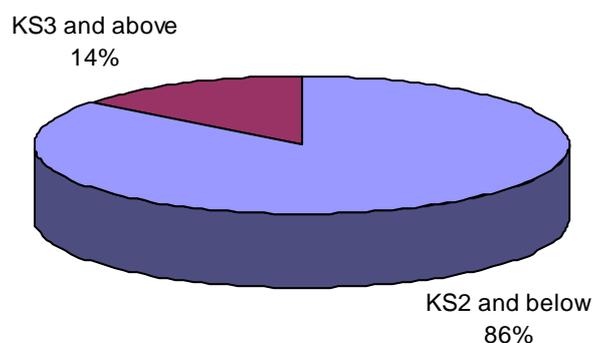
Base: all teachers' responses Q.10, mixed and 'missing' categories excluded, Phase 1 Museums, 2005 (759)

Fig 3.7d: Form A, Q.10: Pupils visiting Phase 2 museums by Key Stage, 2005
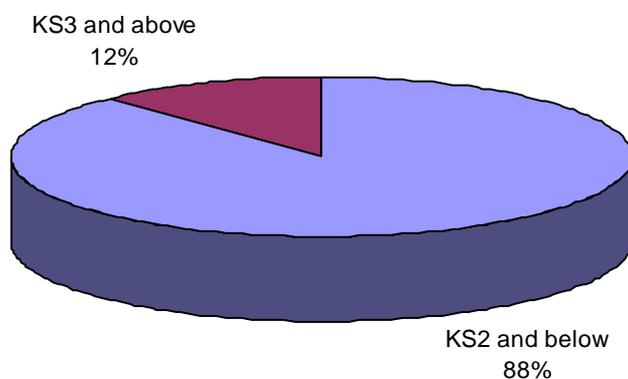
Base: all teachers' responses Q.10, mixed and 'missing' categories excluded, Phase 2 Museums, 2005 (835)

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[76] Proportion of KS2 and below and KS3 and above pupils visiting shows no significant difference by Phase 1 and 2 museums, 2005. Chi square with continuity correction (degrees of freedom 1, n= 1594)=1.59, p 0.21 (>0.05).

3.8 The numbers of pupils who completed Form B

Pupils completed their own questionnaires, Form B.

The teachers visiting the 69 museums in this study were asked if their pupils would complete one of the Form Bs. Teachers sometimes refused to do this because:

- their pupils were too young
- their pupils would have found it too onerous and therefore distressing
- they thought this kind of activity (completing a questionnaire) smacked too much of classroom-type work and was therefore not appropriate in a museum.

Altogether, 26,791 pupils completed questionnaires, 13,176 in the Phase 1 museums and 13,615 in the Phase 2 museums. These figures are considered from various perspectives in the tables below.

The total number of pupils in this study in 2005 who completed Form B can be divided almost equally into two, with half in the Phase 1 museums and half in the Phase 2 museums. The numbers of pupils in the Phase1 museums in the earlier study in 2003 were higher than in this study in 2005. In 2005, fewer teachers completed Form A and fewer pupils completed Form B.

Table 3.8a: Pupils completing Form B by Phase, comparing 2005 and 2003

	2003	2005
Phase 1 museums	20,604	13,176
Phase 2 museums	n/a	13,615

The pupils can be considered in relation to Key Stage.

Table 3.8b: All pupils completing Form B by Key Stage and Phase, 2005

	Total no. pupils	Phase 1	Phase 2
All pupils	26,791	13,176	13,615
KS2 and below	21,845	10,342	11,503
KS3 and above	4,946	2,834	2,112

Fig 3.8c: All pupils completing Form B by Key Stage and Phase, 2005

	Phase 1	Phase 2
■ KS2 and below	78%	84%
■ KS3 and above	22%	16%
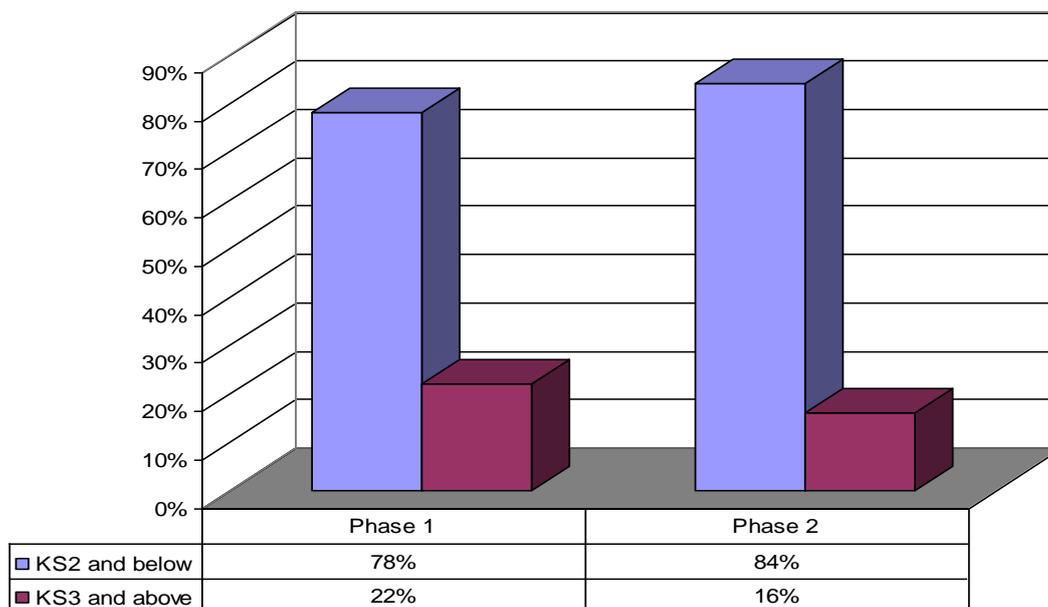
Base: all pupils completing Form B, 2005 (26791)

While KS2 and below pupils remain by far the largest group of museums users, they make up a slightly larger proportion of those completing Form B in the Phase 2 museums when compared to the Phase 1 museums. This difference between the KS2 and below pupils completing Form Bs in Phase 1 and 2 museums is most apparent when the actual number of Forms Bs completed is considered (Fig 3.8c). When the teachers were asked the Key Stage of the class visiting the museum (Fig 3.7b and c), only a 2% difference in the number of KS2 and below pupils visiting Phase 1 and 2 museums can be seen (Phase1 86%, Phase 2 88%). This suggests that a slightly larger proportion of KS2 and below pupils were visiting the Phase 2 museums and were also completing a significantly[77] larger number of Form Bs.

Considerably more older pupils completed forms in the Phase 1 museums, presumably at least in part because there were actually more secondary schools using the Phase 1 museums and therefore more pupils to be asked to complete the forms.

Table 3.8d: Pupils completing Form B by Key Stage, comparing 2005 and 2003

	2005	2003
All pupils	26,791	20,604
KS2 and below	21,845	17,198
KS3 and above	4,946	3,406

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[77] There is a significant difference in the proportion of KS2 and below pupils completing Form B between Phase 1 and 2 museums in 2005. Chi square (degrees of freedom 1, n= 26791)=159.95, p 0.001 (<0.05).

Fig 3.8e: Pupils completing Form B by Key Stage, comparing 2005 and 2003

	2005	2003
■ KS2 and below	82%	84%
■ KS3 and above	18%	16%
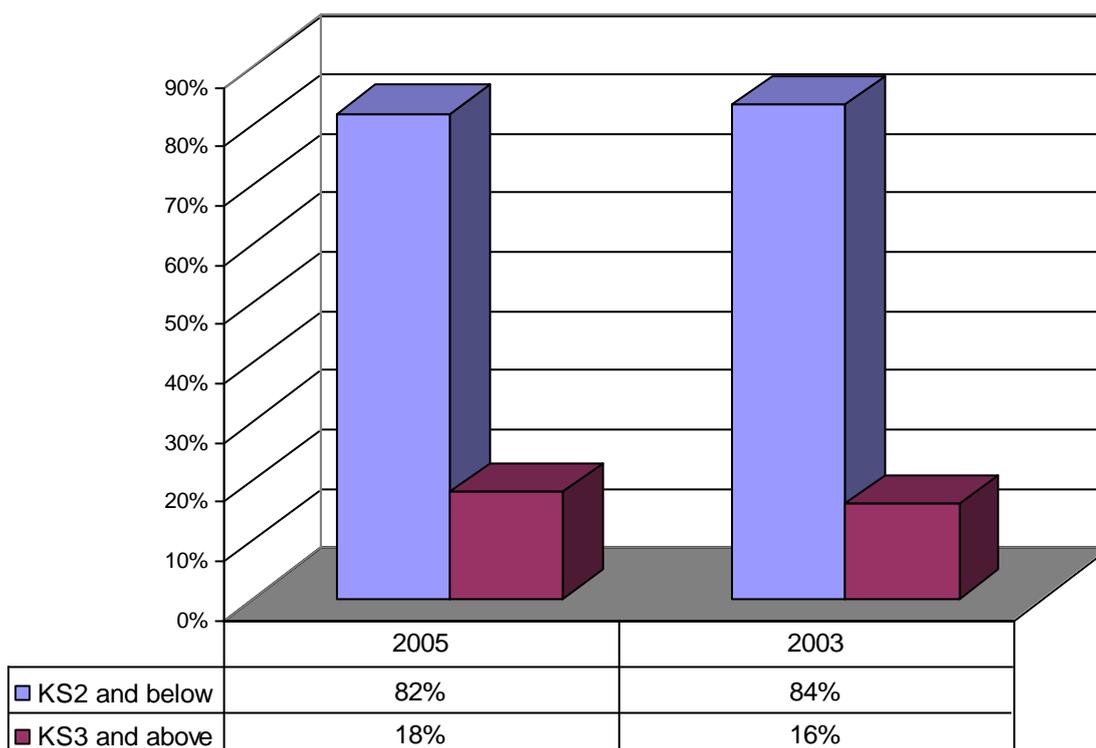
Base: all pupils completing Form B, 2005 (26791); all pupils completing Form B, 2003 (20604)

There are a significantly[78] larger proportion of older pupils completing Form B in 2005 than in 2003. This suggests that while secondary schools made up a smaller percentage of the school audience in 2005 they were still better represented in the percentage of pupils actually completing Form Bs.

The pupils can be analysed in relation to gender. Overall half the pupils visiting museums are female with the remaining proportion male and a small amount of missing data. Gender differences however are more evident when the figures are reviewed by Key Stage; the proportion of male KS2 and below pupils is slightly higher than females, whereas for KS3 and above there are a higher proportion of female pupils visiting museums.

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[78] There is a significant difference in the proportion of KS2 and below and KS3 and above pupils completing Form B between 2003 and 2005. Chi square (degrees of freedom 1, n= 47,395)=29.05, p 0.001 (<0.05).

Fig 3.8f: Pupils completing Form B by gender, 2005
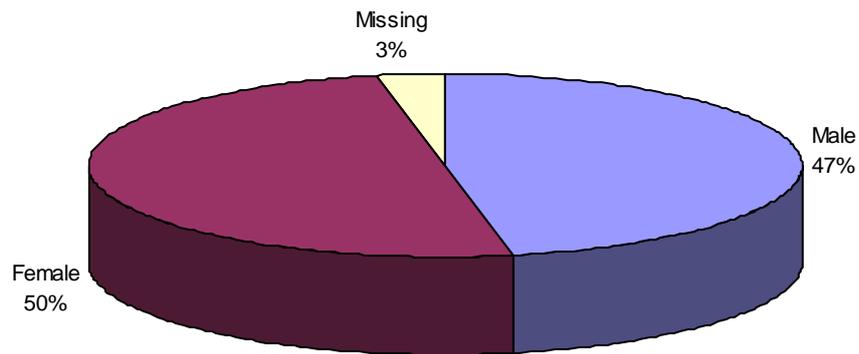
Base: all pupils completing Form B, 2005 (26791)

Fig 3.8g: Pupils completing Form B by gender and Key Stage, 2005

	KS2 and below	KS3 and above
☐ Missing	3%	2%
■ Female	48%	56%
■ Male	49%	42%
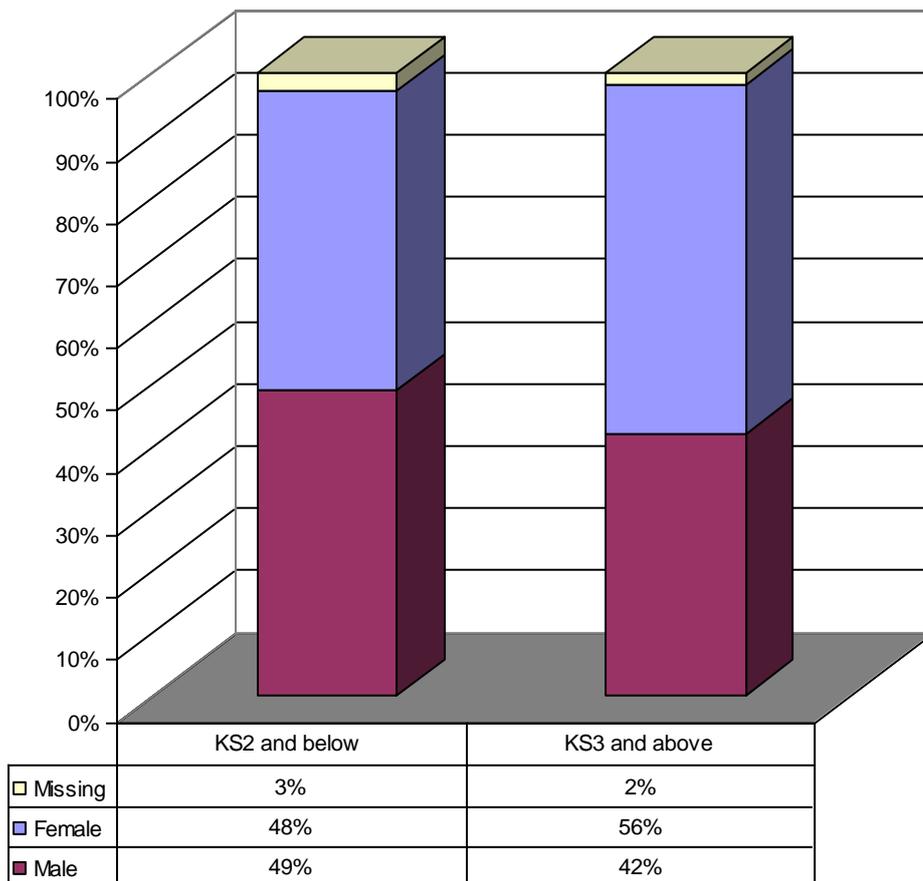
Base: all pupils completing Form B, 2005 (26791)

3.9 Conclusion

Much of the evidence presented in this section echoes and expands on the evidence from the earlier study in 2003. The sample size for this study is considerably larger than for the 2003 study, but exhibits many of the same characteristics. The Key Stage and gender breakdown of the pupils is very similar to the 2003 study. The school breakdown according to the Teachers' Questionnaire is much the same, with the largest percentage coming from primary schools, although there is a suggestion that the Phase 1 museums are attracting more secondary schools than the Phase 2 museums. The analyses of post-codes and entitlement to free school meals continues to suggest, as in the first study, that museums work with disproportionately more schools from areas of high social deprivation than would be expected according to national statistics. One new piece of information is the relatively high percentage of special schools using museums (12%).

The numbers of school-aged children using museums has increased by 40% from 2003-2005. The Phase 1 museums have increased their contacts with school-aged children by 47% and in the Phase 2 museums, the increase is 29%. While there are considerable variations in the uplift achieved by each museum service, as a whole these are remarkable figures, showing that across England, museums are making great efforts to increase their value to schools and families. The figures also show that these efforts can be both sustained and improved over time with continued funding. The increase in use of museums is a major impact of the Renaissance programme. The DCMS target for the Renaissance programme was to increase the number of contacts between children and regional museums by 25% by 2005/6. This target was exceeded by the Phase 1 museums in 2003, and has been exceeded by the museums involved in this study as well.

As in 2003, the vast bulk of school visits are made by primary schools, which represent 81% of the total. Secondary schools make up about 10% of school visits. There appear to be slightly fewer secondary schools than in 2003, with a 3% decrease in relation to the 2003 figures, and a concomitant increase in primary schools. Comparing the types of schools using the Phase 1 and Phase 2 museums is interesting, as it shows that in the Phase 1 museums 12% of schools are secondary schools, while in Phase 2 museums, 9% are secondary schools. When analysing the type of school by Hub, some big differences appear in the proportions of secondary school, with, for example, secondary schools making up 19% of the schools visiting museums in the South West, which is well above the average of 12%.

As in 2003, the school addresses were analysed according to their post-codes to ascertain to what extent museums were working with schools in areas of high social deprivation. In 2005, in addition, an analysis using free school meals data was carried out. The results of both analyses in 2005 confirm that museums are working with a disproportionately high level of schools located in areas of high deprivation where children may be at risk of social exclusion.

Using the IMD 2004 from the Neighbourhood Renewal Unit, 19% of recorded single visits came from SOAs classified as being amongst the 10% most

deprived in England, and 32% of the visits were made by schools located in the 20% most deprived SOAs in England. An analysis of these schools in relation to free school meals, which is a commonly used measure and therefore useful for comparative purposes, shows that 38% of schools using the 69 museums in this study are located in the highest quartile, where the 25% of schools in England with the highest levels of free school meal entitlement are to be found. The evidence from both these analyses and the finding from the 2003 study are consistent.

The analysis of post-codes and entitlement to free school meals also enables a tying together of the evidence from the case-studies and the statistics arising from the questionnaires. Given that both sources of data conform to the same social patterns, strong relationships between the qualitative and quantitative evidence can be assumed.

Form B, the pupils' questionnaires, were completed by 26,791 pupils, with roughly half of the pupils visiting the Phase 1 museums and half visiting the Phase 2 museums. KS2 and below pupils were the main visitors to museums with a larger proportion of KS2 and below pupils visiting Phase 2 museums. Significantly larger numbers of KS2 and below pupils completed Form Bs in the Phase 2 museums.

More Form Bs were completed by older pupils in this 2005 study than in the previous study in 2003, despite the proportion of secondary schools visiting museums in 2005 falling.

The impressive increase of 40% in relation to pupil contacts includes a disproportionate percentage of schools located in areas with high levels of deprivation, where children may be at risk of social exclusion. Evidence of this capacity of museums, to work with schools where deprivation may be experienced by children, is strong and consistent.

The consistency of sample between the first and the second study means that they can be read together, giving useful comparisons over time.

SECTION FOUR

TEACHERS' USE OF MUSEUMS

4.0 Introduction

This section considers how teachers use museums, and reviews the responses to Q.20 – 25 in Form A. In the case-studies and focus groups combined, a total of 31 teachers were interviewed, and insights from these purposeful conversations are integrated into the discussions below, throwing a powerful light on the way in which teachers use museum resources and the way teachers link museums and the curriculum.

The first part of Section 4 deals with general questions. The Teachers' Questionnaire asked whether schools made regular use of cultural organisations, whether this was the first visit to this museum with a school group, and whether the teacher completing the form had organised the visit themselves. The teachers' use of museums over the preceding two years was the subject of Q.21, with sub-questions about visiting (as a teacher), borrowing objects and using on-line resources. These questions have been analysed by Key Stage. In discussions with teachers about their use of museums, these issues were also examined. Here, we found that teachers were sometimes experienced and flexible users of museums, but were sometimes using museums in rather unimaginative ways, and this may link to the maturity of the local museum education service.

The second part of this Section concerns the relationship of the work done to the curriculum, and the themes that teachers use museums to address. While the bulk of teachers continue to use museums for historical themes, there have been some changes since the previous study, with teachers' use of museums being much more open-ended and cross-curricular. The percentage of teachers using museums in an interdisciplinary way has increased enormously. Teachers told us that museum visits enhance the curriculum, sometimes in unexpected ways, and that while the curriculum does not always drive the use of museums (and this has fallen slightly since 2003) there is generally something that can be linked if needed. In comparison with 2003, teachers seemed more relaxed and open-minded about the generative potential of museums, and this is probably linked to shifts in government approaches to the curriculum and to the potential of partners external to schools.

4.1 Teachers' use of museums and other cultural organisations

In the Teachers' Questionnaire (Form A) there were a number of questions asking about the ways in which teachers used museums. We were also able to use the three focus groups and three case-study visits to probe issues raised from the 2003 quantitative data.

♦ Q.24: 'Does your school make regular visits to cultural organisations?'

Evidence from *What did you learn at the museum today?* 2003 revealed that 85% of the teachers surveyed came from schools that made regular visits to cultural organisations.

The findings were very similar for the 2005 study with 86% of teachers responding that their school uses cultural organisations on a regular basis.

Fig 4.1a: Form A, Q.24: 'Does your school make regular visits to cultural organisations?', 2005
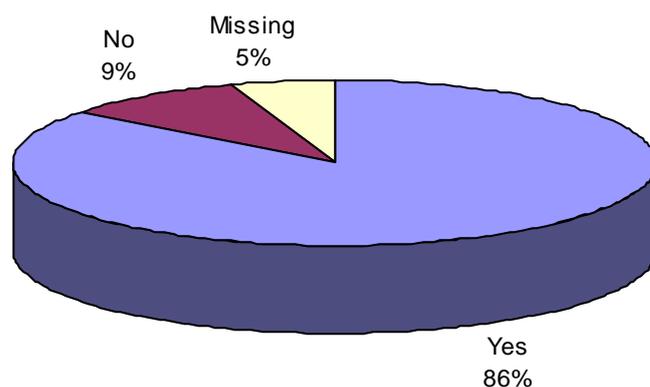
Base: all teachers' responses to Q.24: 'Does your school make regular visits to cultural organisations?', 2005 (1632)

Comparing the 2005 data by museum Phase, only a very small statistically insignificant difference was found between teachers visiting the Phase 1 and the Phase 2 museums.

There was, however, a difference when the 2005 data was compared across the Key Stages. Teachers of KS2 and below pupils were more likely to make regular visits to cultural organisations (91%) than teachers of KS3 and above (86%). In conversations with teachers, and evidence from elsewhere in the quantitative data, it was found that on the whole teachers of KS2 and below pupils were more likely to use museums to support their work.

Fig 4.1b: Form A, Q.24: 'Does your school make regular visits to cultural organisations?', by Key Stage, 2005
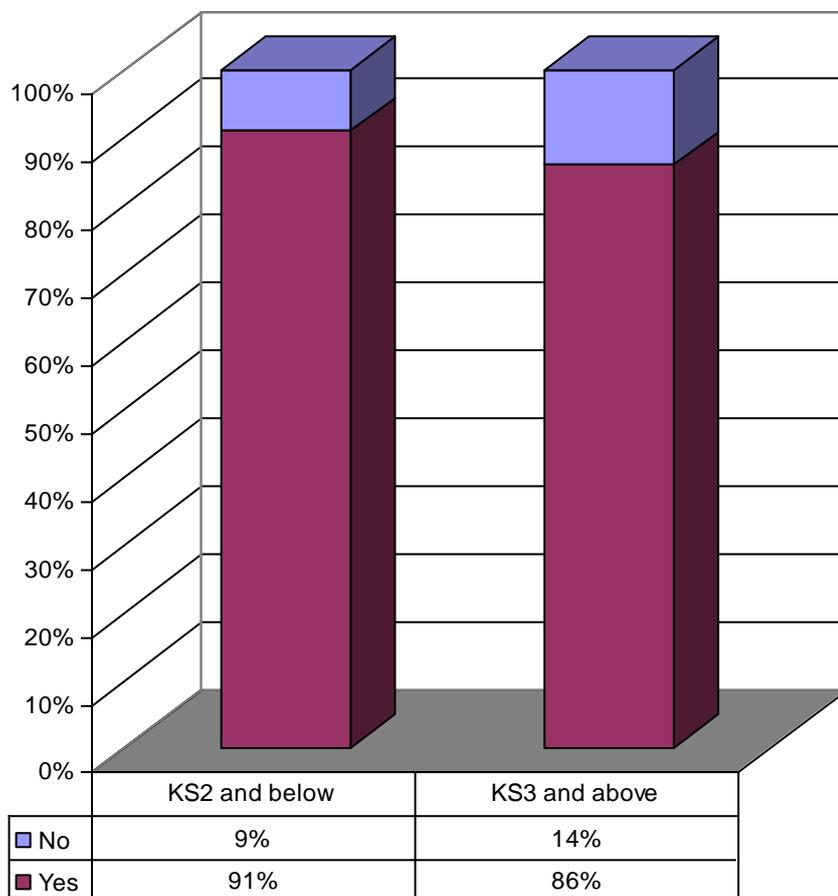
	KS2 and below	KS3 and above
☐ No	9%	14%
■ Yes	91%	86%

Base: all teachers' responses to Q.24: **'**Does your school make regular visits to cultural organisations?' by Key Stage, mixed and 'missing' categories excluded, 2005 (1320 KS2 and below, 197 KS3 and above)

4.2 First visits to museums

♦   Q.20: 'Is this your first visit (as a teacher) to this museum with a class?'

In the 2003 study, it was found that 45% of the teachers visiting the Phase 1 museums in September and October 2003 were using that museum for the first time. This did not mean that these teachers had not used museums before but it did suggest that one of the impacts of Renaissance funding was to attract new teachers to the Phase 1 museums. In the 2005 study it was found that results were comparable to the first study, with 43% of teachers indicating that it was the first time they had visited that museum with a class.

Fig 4.2a: Form A, Q.20: 'Is this your first visit (as a teacher) to this museum with a class?', 2005
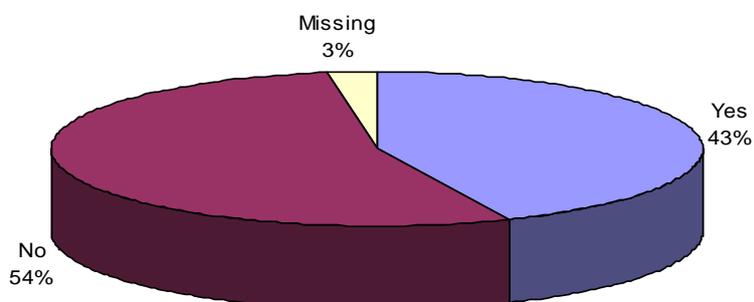
Base: all teachers' responses to Q.20**:** 'Is this your first visit (as a teacher) to this museum with a class?', 2005 (1632)

Fig 4.2b: Form A, Q.24 and Q.20: is this your first visit (as a teacher) to this museum with a class?, Phase 1 museums, 2003 and 2005

	Phase 1 2005	Phase 1 2003
☐ Yes	40%	45%
■ No	60%	55%
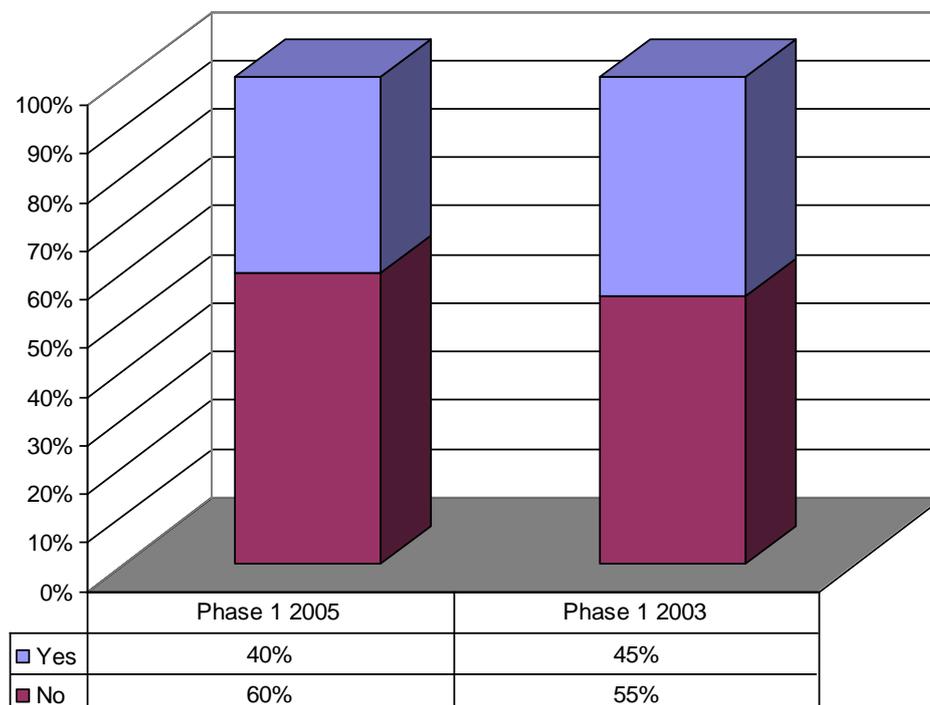
Base: all teachers' responses Q.20: 'Is this your first visit (as a teacher) to this museum with a class?', in Phase 1 museums, 2005 and all teachers' responses Q.24: 'Is this your first visit (as a teacher) to this museum with a class?', 2003 (755 Phase 1 museums 2005, 922 Phase 1 museums 2003)

Given that the 2003 study involved the Phase 1 museums only, it makes sense to compare the 2003 study as a whole with the data from the Phase 1 museums in 2005. Looking at Phase 1 museums in 2005, it can be seen that the number of new teachers visiting these museums has declined slightly from 45% in 2003 to 40% in 2005, however this is not a statistically significant difference.[79]

However, it may suggest that the increased relationships which have been built with schools as a result of Renaissance funding may have encouraged greater numbers of teachers to make repeat visits.

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[79] There is not a significant difference between teachers being on a first visit to the museum by Phase 1 museums in 2003 and 2005 ('missing' excluded). Chi square with continuity correction (degrees of freedom 1, n= 1669)=3.63, p 0.06 (>0.05).

When comparing the 2005 data in relation to first visits across the Phase 1 and Phase 2 museums it can be seen that there are more first visits made by teachers to the Phase 2 museums in 2005. In total, 49% of teachers visiting Phase 2 museums responded that it was their first visit to that museum with a class compared to 40% of teachers visiting Phase 1 museums. Phase 2 museums appear to be extending their reach into schools considerably.

Fig 4.2c: Form A, Q.20: 'Is this your first visit (as a teacher) to this museum with a class?' by Phase 1 and Phase 2 museums, 2005
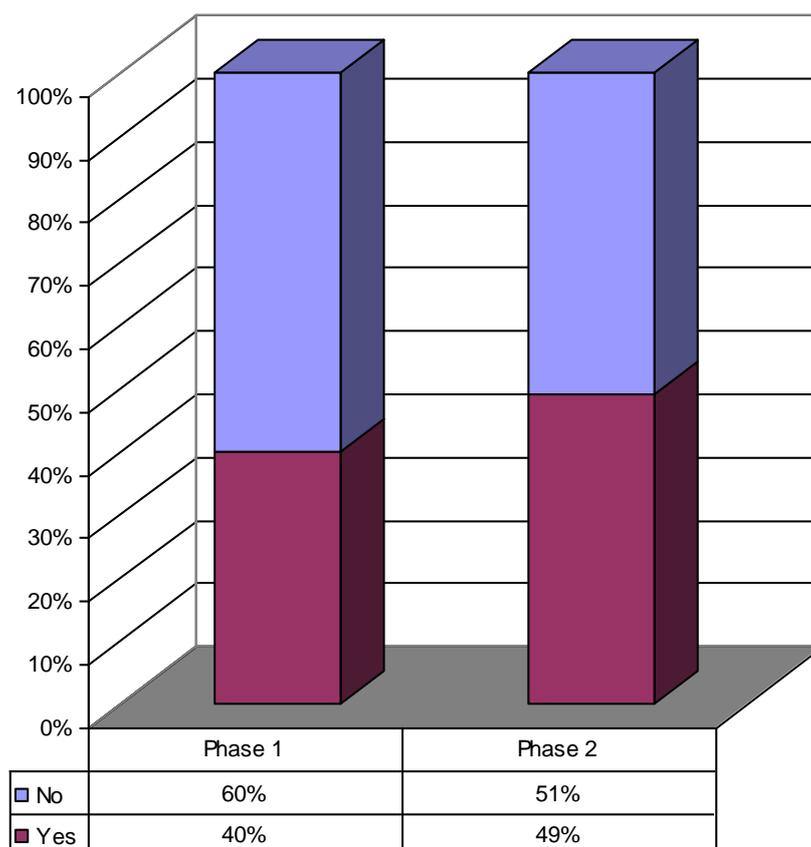
	Phase 1	Phase 2
☐ No	60%	51%
■ Yes	40%	49%

Base: all teachers' responses to Q.20: 'Is this your first visit (as a teacher) to this museum with a class?' by Phase, 2005 (755 Phase 1 museums, 833 Phase 2 museums)

Looking across the teachers visiting by Key Stage it can be seen that 46% of teachers making their first visit were teachers of KS2 and below compared to 36% of teachers of KS3 and above. This is a significant[80] difference. The challenges faced by KS3 and above teachers in taking pupils to museums were raised in the focus groups. These include the constraints of secondary timetabling, and the need to accommodate often large groups, including whole year groups, which presented a challenge for teachers and museums alike in organising visits.

Fig 4.2d: Form A, Q.20: 'Is this your first visit (as a teacher) to this museum with a class?' by Key Stage, 2005
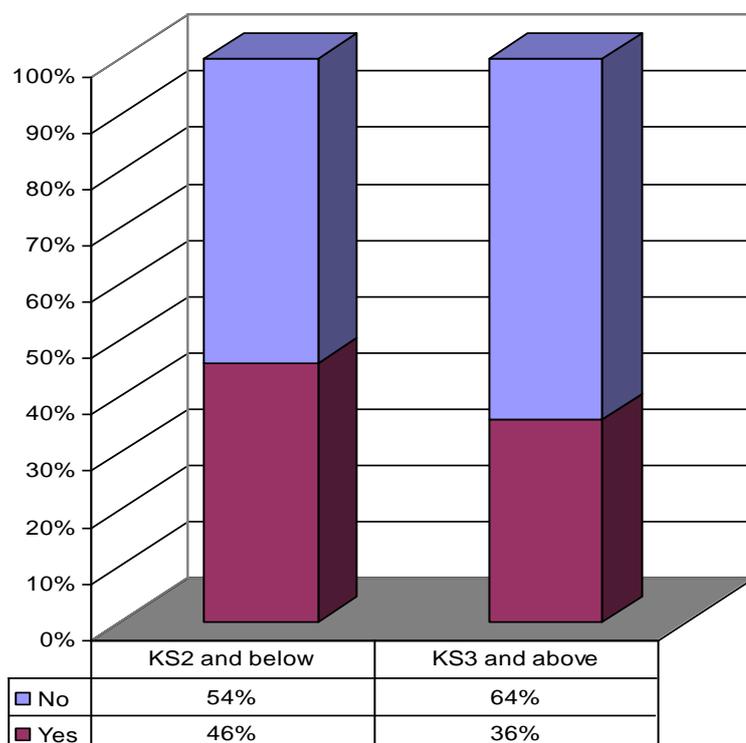
	KS2 and below	KS3 and above
☐ No	54%	64%
■ Yes	46%	36%

Base: all teachers' responses to Q.20: 'Is this your first visit (as a teacher) to this museum with a class?' by Key Stage (1359 KS2 and below, 200 KS3 and above)

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[80] Proportion of KS 2 and below and KS 3 and above pupils visiting shows a significant difference by first visit, 2005. Chi square with continuity correction (degrees of freedom 1, n= 1559)=7.24, p 0.006 (<0.05).

4.3 Organising the visit

♦ Q.21: 'Did you organise this visit?'

The data from the first study in 2003 indicated that 62% of teachers completing the questionnaire organised the visit to the museum themselves.

From the data supplied by teachers as part of the 2005 study it appears that the majority of teachers continue to organise the visit to the museum themselves (58%). There was no significant difference between teachers across the Phase 1 and Phase 2 museums or by primary and secondary teachers.

Fig 4.3a: Form A, Q.21: 'Did you organise this visit?', 2005
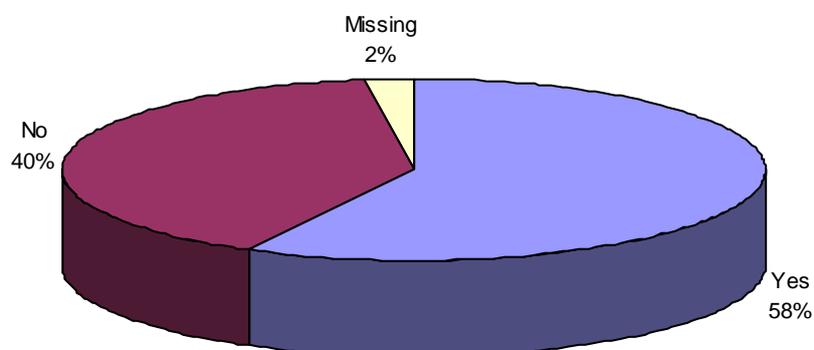
Base: all teachers' responses to Q.21: 'Did you organise this visit?', 2005 (1632)

4.4 The use of museums in the past two years

♦ Q.25: 'In the past two years have you (as a teacher) visited a museum, used on-line museums resources or borrowed an object or handling box from a museum?'

This question asked teachers to review their use of museums over the past two years. This question was added to the questionnaire for 2005 at the request of MLA, so no comparisons could be made with the first study. The qualitative data gathered through focus groups and case-studies supported the quantitative findings.

♦ Visited a museum (other than today)?

A large number of teachers who completed the questionnaire had visited a museum other than the museum they visited at the time of the research in the past two years, 86% of the total.

Fig 4.4a: Form A, Q.25: 'In the past two years have you (as a teacher) visited a museum?', 2005
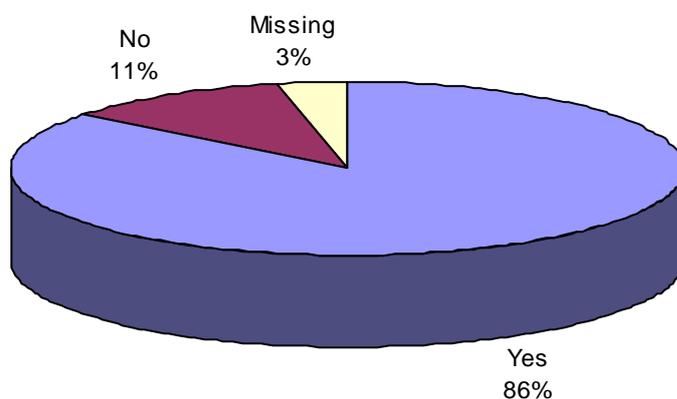
Base: all teachers' responses to Q.25: 'In the past two years have you (as a teacher) visited a museum?', 2005 (1632)

Despite making fewer visits to museums, KS3 and above teachers were slightly more likely to have visited a museum in the past two years, 92% responded 'yes' compared to 88% of KS2 and below teachers. This is interesting as it seems to contradict the finding that teachers of KS2 and below are more likely to visit museums (and other cultural organisations), as based on the findings from Q.24 which shows the larger volume of visits made by such teachers during the research period. It may mean that those KS3 and above teachers that do use museums use them in a consistent manner.

Fig 4.4b: Form A, Q.25: 'In the past two years have you (as a teacher) visited a museum (other than today)?' by Key Stage, 2005
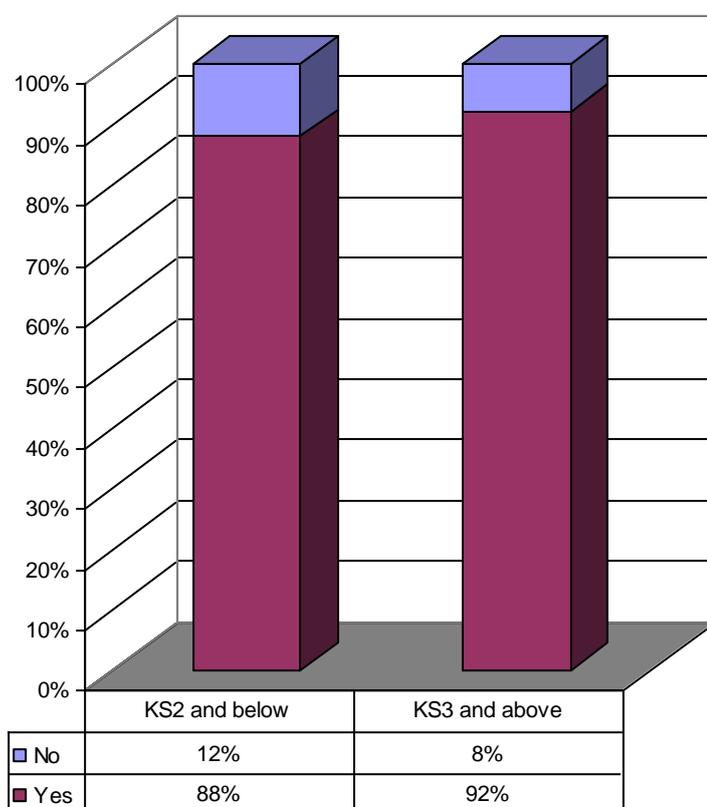
	KS2 and below	KS3 and above
No	12%	8%
Yes	88%	92%

Base: all teachers' responses to Q.25: 'In the past two years have you (as a teacher) visited a museum?', 2005 by Key Stage (1320 KS2 and below, 197 KS3 and above)

♦ Used on-line museum resources?

Overall, 64% of teachers had used on-line museum resources in the past two years.

Fig 4.4c: Form A, Q.25: 'In the past two years have you (as a teacher) used on-line museum resources?', 2005
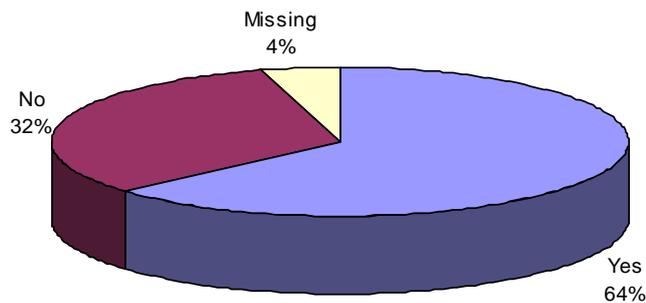
Base: all teachers' responses to Q. 25: 'In the past two years have you (as a teacher) used on-line museum resources?', 2005, (1632)

There was no significant difference in the use of on-line resources between teachers of the different Key Stages perhaps suggesting that museum on-line resources are suitable for a range of potential users.

However, there was a slight difference between the teachers visiting the different Hub museums. Of those teachers visiting the Phase 1 museums, 69% answered that they used on-line museum resources compared to 64% of teachers visiting Phase 2 museums. This 5% difference is not statistically significant;[81] however, it may suggest that the Phase 1 museums have been successful in responding to the developing e-learning context through development of web resources. The importance of the use of the web for teachers was underlined in the case-studies and focus group discussions, where almost all teachers referred to the use of museum web-pages.

Fig 4.4d: Form A, Q.25: 'In the past two years have you (as a teacher) used on-line museum resources?', by Phase 1 and Phase 2 museums, 2005
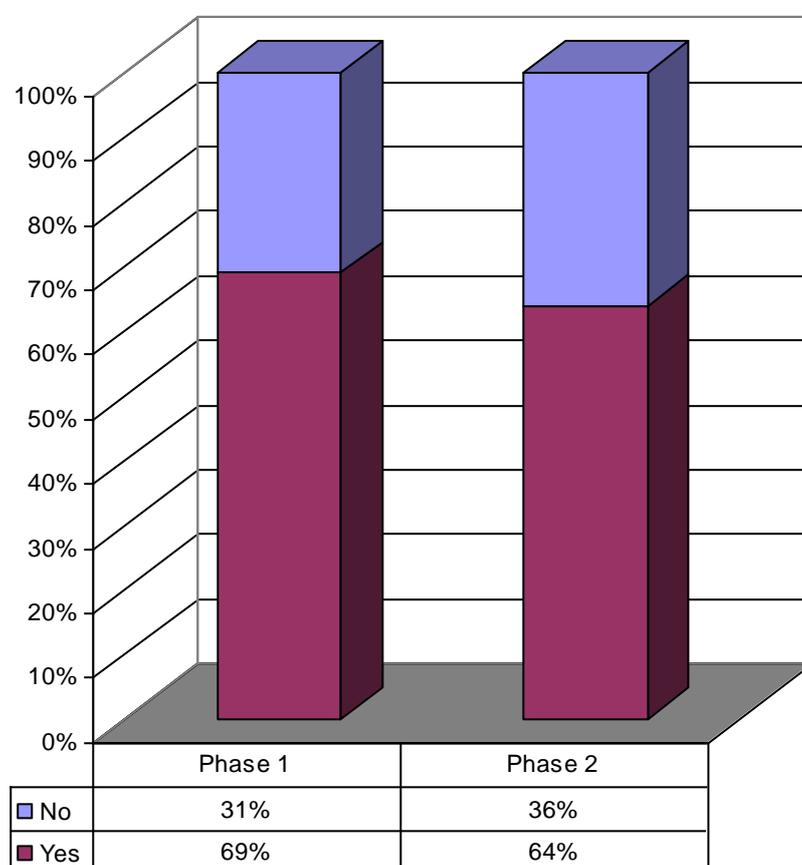
	Phase 1	Phase 2
No	31%	36%
Yes	69%	64%

Base: all teachers' responses to Q. 25: 'In the past two years have you (as a teacher) used on-line museum resources?' by Phase, 2005, (Phase 1 museums 742, Phase 2 museums 816)

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[81] There is a not a significant difference in teachers using online museum resources in Phase 1 and 2 museums ('missing' excluded). Chi square with continuity correction (degrees of freedom 1, n= 1558 =3.51, p 0.061 (>0.05)

Birmingham Museums and Art Gallery reported in its Form D that usage of its web-pages has risen from 52,000 user sessions in 2003 to 462,000 user sessions in 2005. As usage dips in August, they are fairly certain that it is mainly pupils and teachers using the site.[82]

Fig 4.4e: Birmingham Museums and Art Gallery website

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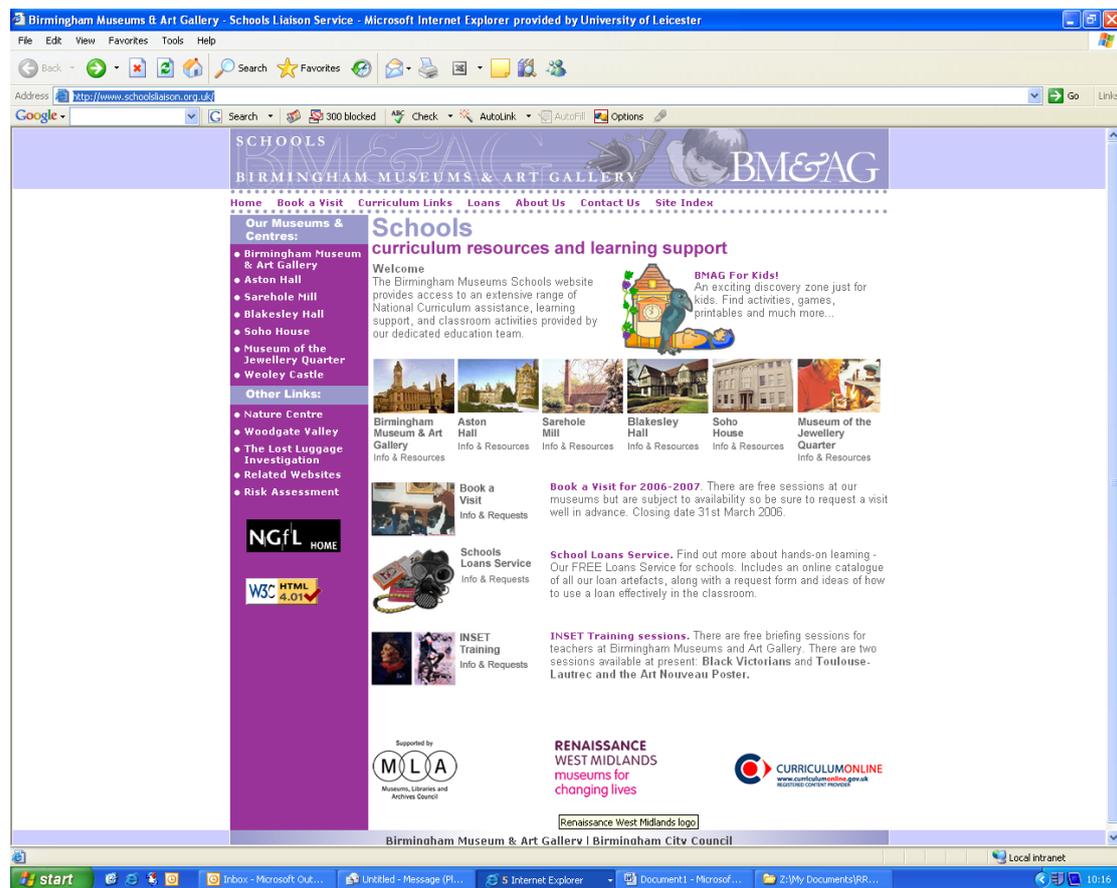
[82] See http://www.schoolsliaison.org.uk/. Further information provided by Jan Anderson of Birmingham Museums and Art Gallery.

♦ Borrowed an object or handling box from a museum?

Forty percent of teachers who completed the questionnaire have borrowed an object or handling box from a museum in the last two years. Fewer teachers used these resources than made a visit to a museum or used on-line resources. However, this may reflect lack of availability as many loan services were closed down in the 1980s and so loan services are not uniformly available across England.

Fig 4.4f: Form A, Q.25: 'In the past two years have you (as a teacher) borrowed an object or handling box from a museum?', 2005
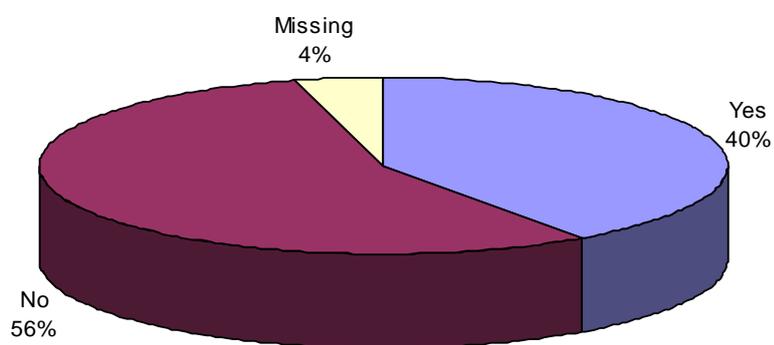
Base: all teachers' responses to Q. 25: 'In the past two years have you (as a teacher) borrowed an object or handling box from a museum?', 2005 (1632)

Primary teachers were more likely to use these resources than secondary teachers. There were more teachers of KS2 and below (45%) who had borrowed an object or handling box from a museum in the last two years than teachers of KS3 and above (22%).

Fig 4.4g: Form A, Q.25: 'In the past two years have you (as a teacher) borrowed an object or handling box from a museum?', by Key Stage, 2005

	KS2 and below	KS3 and above
■ No	55%	78%
■ Yes	45%	22%
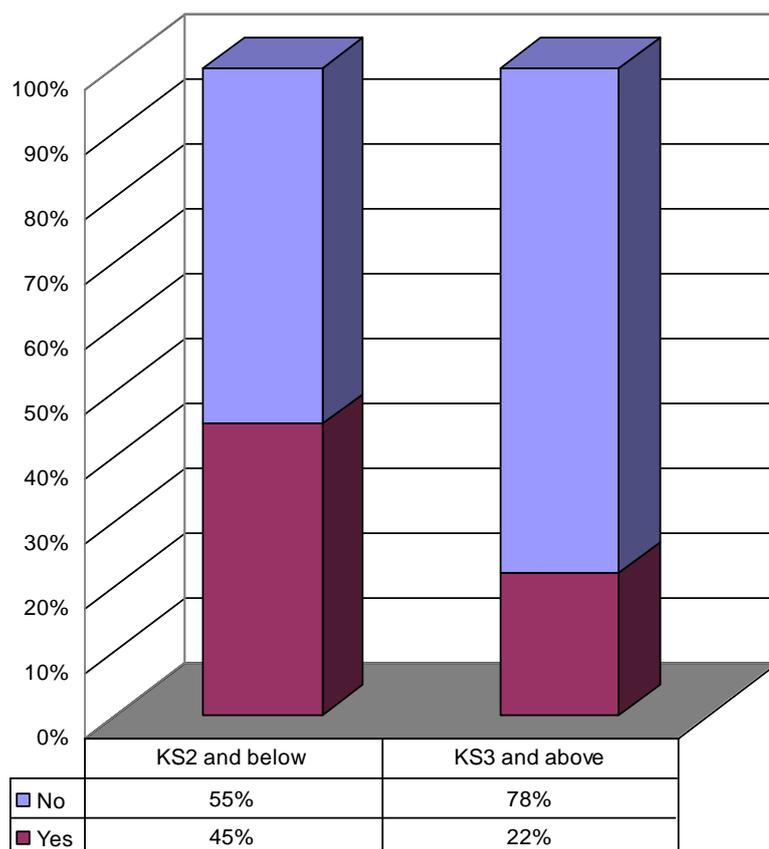
Base: teachers' responses to Q.25: 'In the past two years have you (as a teacher) borrowed an object or handling box from a museum?', by Key Stage, 2005 (1337 KS2 and below, 199 KS3 and above)

4.5 Talking to teachers about how they used museums

The quantitative data showed clearly that teachers visited museums alongside other cultural organisations, and that they also used museum resources on a regular basis. Talking to teachers in focus groups and on case-study visits enabled a deeper exploration of the way teachers thought about what they and their pupils could get out of museums.

Fig 4.5a: A focus group

Through discussions we were able to explore further how museums were used and how teachers' views and attitudes affected this use. We talked with a range of teachers with varying levels of experience in using museums as a resource for their teaching and we found that, on the whole, we could think about these teachers' in two categories:

- Teachers who were regular and committed users of museums and used museums in a very proactive flexible fashion; and,
- Teachers who used museums once or twice a year in a reactive fashion for quite limited purposes.

The first category of teachers talked about using a diversity of museums as well as other cultural resources. Teachers talked about dropping into museums for quick visits as well as more involved structured visits (although drop-in visits depended on geographic access to museums). These teachers

also used museums flexibly, taking advantage of the various resources museums offer, including facilitated sessions, Internet resources, teachers' kits/packs, and so forth. These teachers were very confident in talking about their ability to take advantage of either facilitated museum sessions or were 'happy to come independently to the museum'. Many of these teachers also talked about working in partnership with museum staff to achieve a particular learning outcome for their pupils. These teachers were also able to see the diversity of cross-curricular uses which a museum visit can offer. These regular users saw museums as useful for topic-based work, but they were also much more adventurous in their approach. These teachers were able to see the benefits of a museum visit at all stages of teaching a topic: 'taking kids to the museum at the beginning generates enthusiasm and taking them at the end [is about] making connections'.

It is important to point out here that while most of the teachers in the case-studies and focus groups who represented this more flexible and proactive use of museums were based in urban schools this was by no means the case for all of them. Proactive and flexible use is not simply a matter of better geographical access to cultural resources. Indeed most of the urban-based teachers did not have a museum 'around the corner' and therefore a visit to the museum was still subject to complex logistics concerning travel, permissions, risk assessments, and so forth.

Teachers who were proactive and flexible users of museums believed that regular museum visits led to better broad-based learning outcomes:

'Bringing children to the museum, the impact is in the future- cultural change and education- it instils an instinctive desire to find out about where they are'.

'The real benefit that I felt with that group was the regular going to the gallery and seeing it as being somewhere familiar… and they actually went back on their own and took their parents'.

'A museum visit develops skills of analysis and evaluation, it's your real higher order kind of skills, skills anyway of synthesis of different arguments and comparison'

'Dressing up at Blakesley Hall, acting in role, leads to empathy, children gain so much and have fun'.

Fig 4.5b: A pupil learns a great deal through dressing up at Blakesley Hall
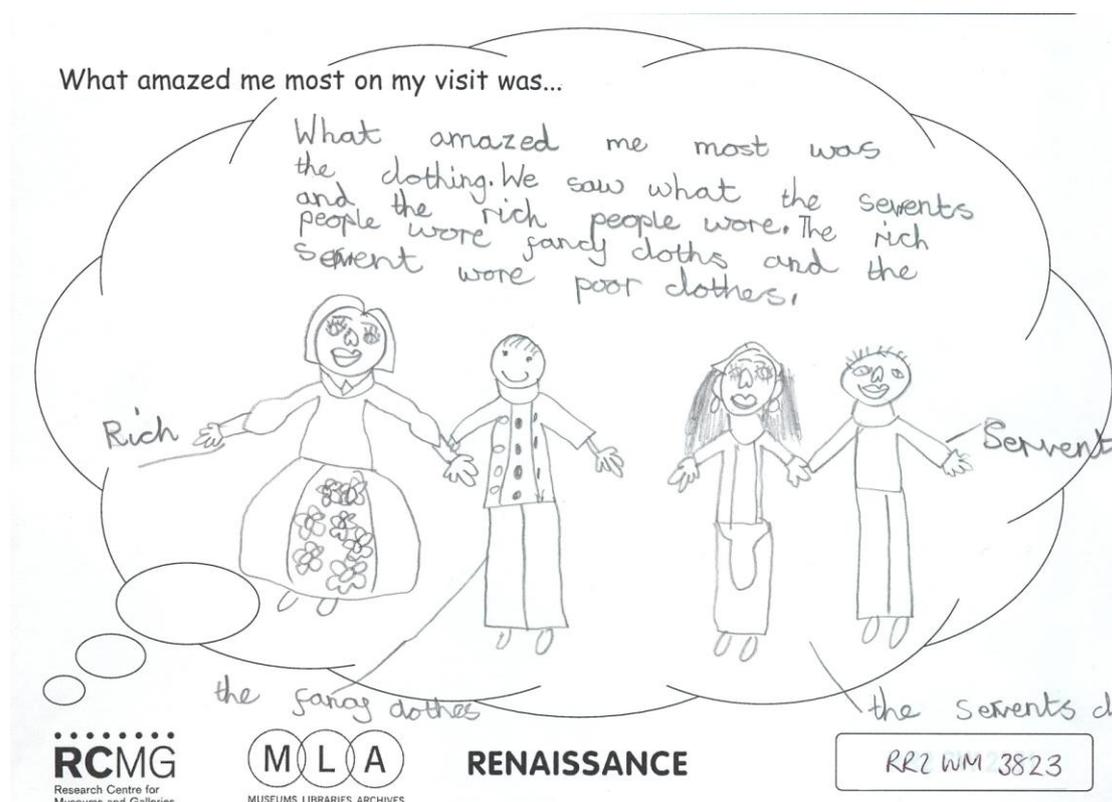
The second category of teacher tended to use museums once or twice a year for a specifically topic-related purpose, for example: 'to do the Romans'. These teachers were less flexible about the ways in which they used the museum and were more limited in their assessment of what they thought the museum could offer their pupils. For these teachers the museum visit should come at the end of a subject as the museum 'does not teach' and pupils should 'already have the knowledge and understanding' when they go to the museum. Given their understanding of the museum as simply an illustration of a topic area it is unsurprising that many of these teachers preferred a loan service which sent copies of artefacts to the school for discussion in class rather than going on a museum visit.

Developing an understanding of how teachers use museums and the impact this will have on the pupils' learning has to take into account a number of complex factors. Notably, from the focus groups and case-studies we found that teachers who were regular users of museums were more analytical about their use of museums, the quality of museum provision, their own and their pupils learning outcomes. However, we also found evidence that where regular involvement with a museum is not based on a good quality partnership with the school and good quality facilitation from the museum and/or the school then pupils learning outcomes were limited. See Section 7 for further discussion.

4.6 Using museums for curriculum-related work

The relationship between the museum visit and the curriculum is an important one. In the first study in 2003, 94% of teachers agreed that their work at the museum was linked to the curriculum. The time period during which the research was carried out may have had a bearing on this, as more visits carried out at the beginning of the school year are likely to be linked to the curriculum than at the end of the school year in June/July. Both the studies were carried out during the Autumn term.

♦   Q.22: 'Is the work done with the museum today directly linked to the curriculum'?

In 2005, 90% of teachers responded that the work they were doing with their pupils at the museum was linked to the curriculum. The change from 94% in 2003 is a statistically significant difference.[83] Teachers may be beginning to use museums in a more open-ended way, possibly encouraged by shifts in government strategies that emphasise creativity in teaching and learning.

Fig 4.6a: Form A, Q.22: 'Is the work done with the museum today directly linked to the curriculum?', 2005
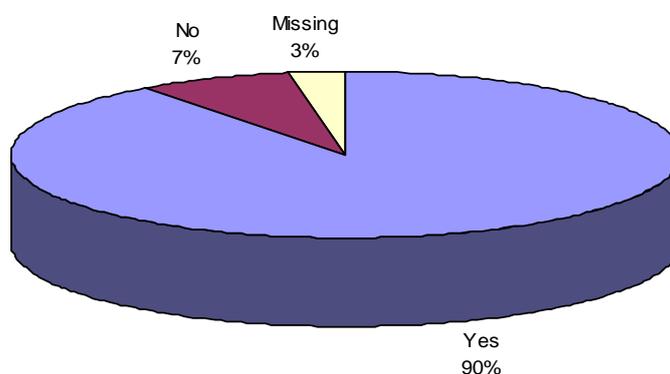
Base: all teachers' responses to Q.22: 'Is the work done with the museum today directly linked to the curriculum?', 2005 (1632)

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[83] There is a significant difference in teachers' work at the museum being linked to the curriculum between 2003 and 2005 ('missing' excluded). Chi square with continuity correction (degrees of freedom 1, n= 2499)=7.984, p 0.005 (<0.05).

There is a significant difference between the Phase 1 and the Phase 2 museums in terms of whether work was linked to the curriculum, with teachers' visiting Phase 2 museums more likely to undertaking work linked to the curriculum.[84]

When this question is considered in relation to primary and secondary teachers, the data reveals that more teachers of KS2 and below link their visit directly to the curriculum, 94% compared to 87% of KS3 and above teachers. There is a 7% difference between primary and secondary teachers.

Fig 4.6b: Form A, Q.22: 'Is the work done with the museum today directly linked to the curriculum?', by Key Stage, 2005

	KS2 and below	KS3 and above
☐ No	6%	13%
■ Yes	94%	87%
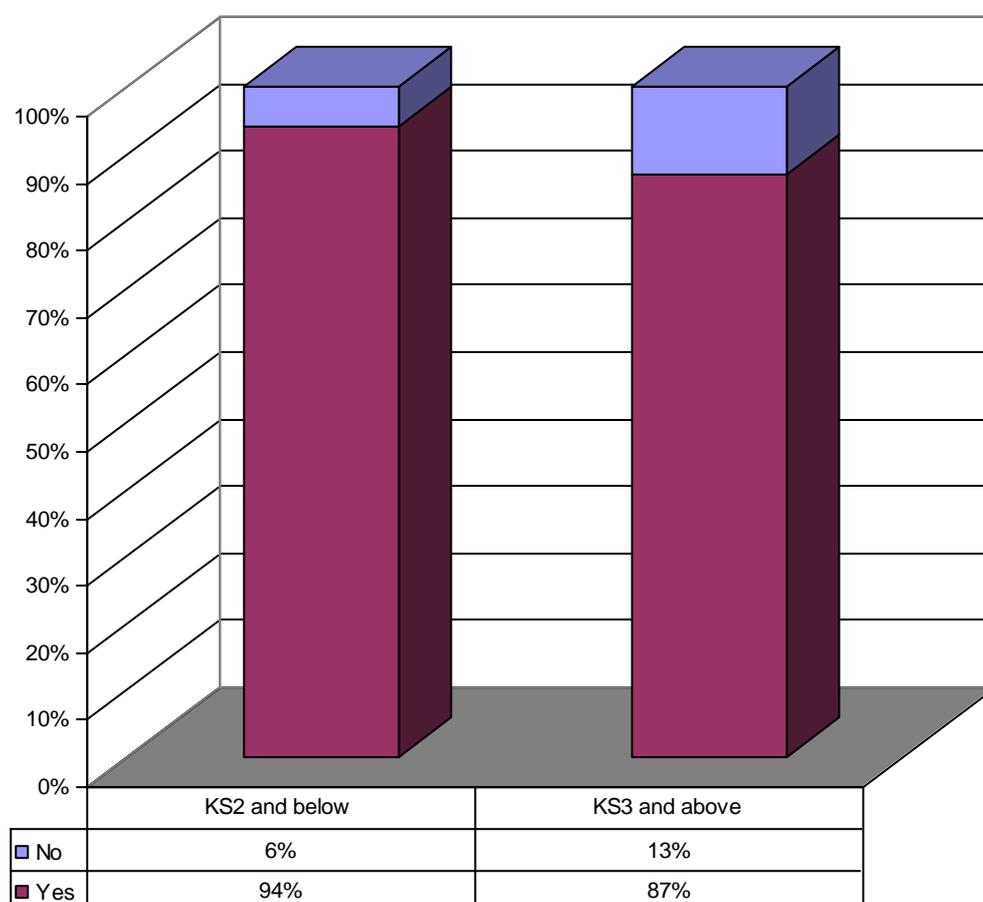
Base: all teachers responses to Q.22: 'Is the work done with the museum today directly linked to the curriculum?' by Key Stage, 2005 (1359 KS2 and below, 196 KS3 and above)

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[84] There is a significant difference in teachers' work at the museum being linked to the curriculum by Phase 1 and Phase 2 museums ('missing' excluded). Chi square with continuity correction (degrees of freedom 1, n= 1583)= 4.31, p 0.04 (<0.05).

4.7 The themes the teachers are studying

In the first study in 2003, Form A, Q.4 asked: 'What theme are you studying?'. The teachers' themes that emerged as responses to the questionnaire were grouped into five curriculum–related categories. The vast bulk of visits were made by teachers working on History-related themes (70%), with very much smaller numbers in the other categories.

Fig 4.7a: Form A, Q.4: 'What theme are you studying?', 2003
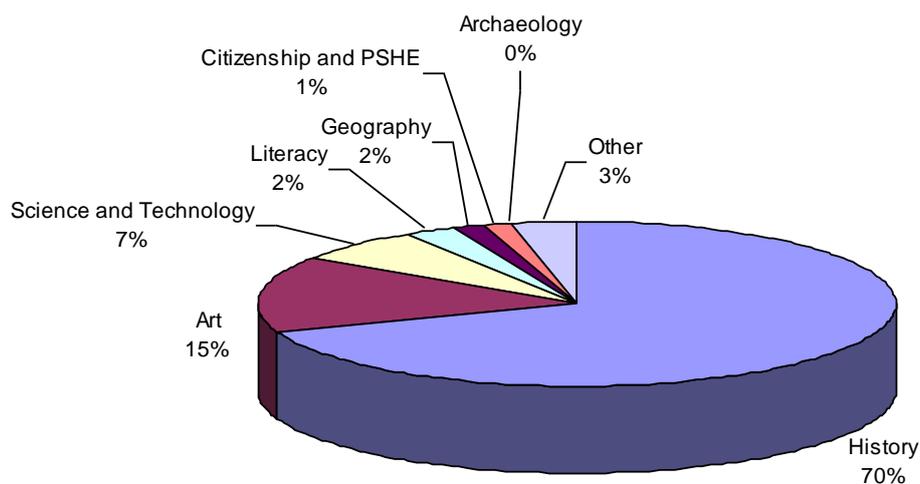
Base: all teachers' responses to Q.4: 'What theme are you studying?', 'missing' excluded, 2003 (924)

Reflecting on the first study, the researchers queried the use of these categories, and worried whether coding the themes into subjects had the effect of masking the interdisciplinary use of museums. To some extent, it had, as teachers told us in the first study that although they were ostensibly using the museum to follow a specific subject-related theme, they were also well aware that learning outcomes would be broader than this might suggest. However, a question still remained as to whether teachers were actually following interdisciplinary themes that had been coded up as single subject themes.

In order to try to capture the complex character of museum use a little more effectively, and to allow the interdisciplinary categories to become visible, the question about what the teachers were doing in the museum was posed in a broader way in 2005. Form A, Q.23 asked: 'What curriculum areas are you covering in your visit today?'. Teachers tended to give a little more information in their answers as a result. In coding the responses, where more than one subject area was mentioned by teachers, the response was coded 'interdisciplinary'. Apart from this, the responses were coded in the same way as in the earlier study.

Fig 4.7b: Form A, Q.23: 'What curriculum areas are you covering in your visit today?', 2005
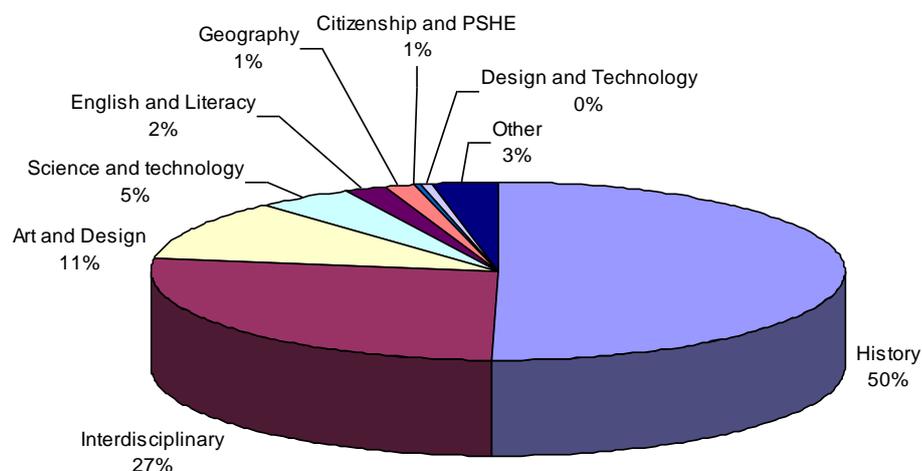
Base: all teachers' responses to Q.23: 'What curriculum areas are you covering in your visit today?', missing excluded, 2005 (1525)

Bearing in mind these changes to the coding of data, History still emerges as the most frequently found subject area with 768 teachers (50%) following a range of themes including:

- Agricultural revolution
- Ancient Egypt
- Romans
- Victorians
- Black History (Black History month was in October)
- Aztecs.

Four-hundred and nine teachers (27%) indicated that their visit was 'interdisciplinary' and could relate to a variety of themes across the curriculum:

- History and Literacy
- History and Science
- Art and Design, Citizenship and Maths.

Some teachers were more explicit e.g. 'Life as a Tudor, introduction to Tudor topic, links to Literacy, Art, Creative Writing, Geography' and 'Mainly History with many cross-curricular links i.e. Geography, Literacy (follow up work), ICT (follow up work), Technology'.

Art and Design themes included Africa and African masks, relationships, landscapes and sculpture. One-hundred and sixty-nine teachers indicated specifically that their visit was related to Art and Design (11%).

Sixty-nine teachers (5%) specially related their visit to themes of Science and Technology, 29 teachers (2%) to English and Literacy, 20 (1%) to Geography and 8 (1%) to Citizenship and PSHE. Six teachers (0%) were using the museum to teach Design and Technology.

Forty-seven teachers (3%) followed other kinds of themes which did not conveniently fit into these categories and were therefore coded 'other'. This category also included themes indicated by less than 5 teachers. These included:

- Media studies
- Sociology
- Health and Social care
- Leisure and Tourism.

General visits were also included within this 'other' category.

In order to check the significance of the emergence of the large interdisciplinary category, the data from the first study was revisited and, where relevant, recoded to identify those themes that could be understood as 'interdisciplinary'.[85] The pie chart shows that this category did exist in 2003, but was very small at 4%.

Fig 4.7c: Form A, Q.4: 'What theme are you studying?' reclassified, 2003
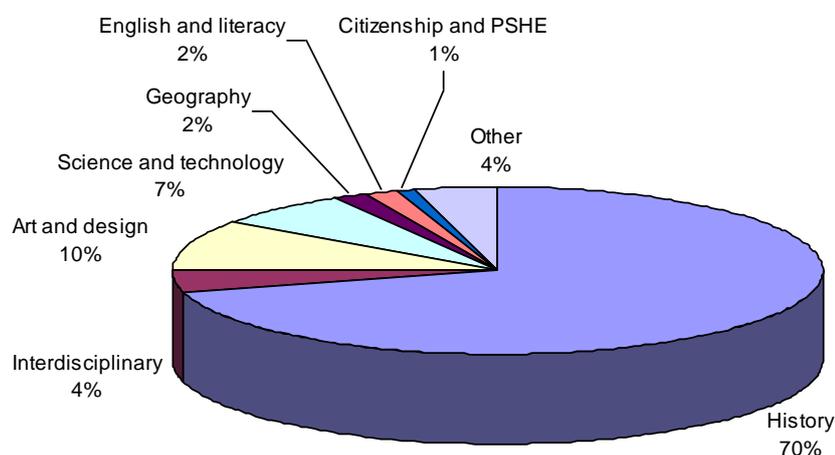
Base: all teachers' responses to Q.4: 'What theme are you studying?', reclassified and 'missing' excluded, 2003 (890)

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[85] One or two responses had been incorrectly coded in 2003 as 'other' where they should have been coded as 'missing'. This was remedied.

The 'interdisciplinary'[86] theme was further investigated in order to explore the increase from 4% to 27%. At the second seminar with museum participants, some interesting points were raised about how teachers were using museums in relation to broader areas of the curriculum, such as 'developing enterprise behaviours', or were using History as a springboard for other subjects. The Qualifications and Curriculum Authority (QCA) in particular is interested in how History can be pivotal in driving interdisciplinary work and raising its status as a minority subject.[87] Questions were also raised about the proportions of teachers of KS2 and below and KS3 and above who indicated interdisciplinary themes. These points suggested one way of examining the 'interdisciplinary' category, which was to understand the role that History might play in driving interdisciplinarity.

Revisiting the teacher responses that were coded under the 'interdisciplinary' category, these were re-categorised according to the following:

- where they specifically mentioned History or a specific period studied in the curriculum (e.g. Victorians, Ancient Egypt) these were coded as 'History'
- where teachers mentioned humanities but did not specifically mention History, these were coded under 'Humanities'
- any other combination of subjects were coded as 'other'.

Fig 4.7d: Re-categorising the 'interdisciplinary' category to include combinations of subjects including History, 2005
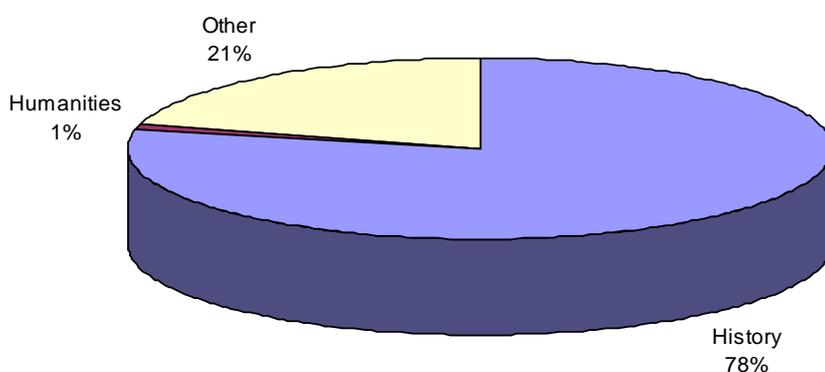
Base: all teachers' responses to Q.23: 'What curriculum areas are you covering in your visit today?' categorised as 'interdisciplinary', 2005 (409)

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[86] 'Interdisciplinary' was used as a category where two or more discrete subjects were mentioned or where the teacher made a direct reference to cross-curricular working.
[87] See *Innovating with History* part of the QCA website which outlines how History can contribute to the wider curriculum http://www.qca.org.uk/history/innovating/.

Of the 409 responses coded as 'interdisciplinary' it can be seen that 78% of these include History specifically mentioned as a subject studied. A further 1% of teachers mention 'Humanities', which is likely to include History. This appears to support the view that teachers are recognising that History can be linked to other areas of the curriculum, as diverse as Art, Science, Maths and Literacy, as advocated by the QCA. Museums can play an important role in this as is evidenced by the increasing numbers of teachers using museums to support interdisciplinary work.

Using the data from Form A, the themes coded under 'interdisciplinary' were matched back to the school data in order to ascertain the Key Stage of the pupils accompanying the teacher. The findings from Q.10 were used in order to categorise each response to Q.23 in relation to KS2 and below, KS3 and above or mixed.

Fig 4.7e: Re-categorising the 'interdisciplinary' category to link responses to Key Stage of pupils accompanying the teacher, 2005
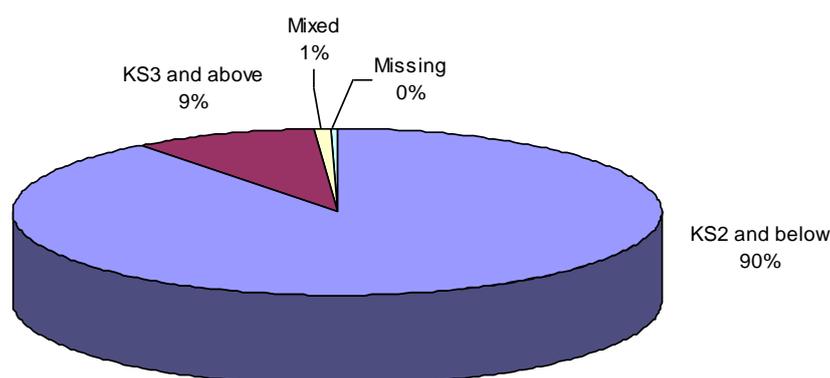
Base: teachers' responses to Q.23: 'What curriculum areas are you covering in your visit today?' categorised as 'interdisciplinary' (409)

It can be seen that the vast majority of teachers who recorded responses that could be coded under 'interdisciplinary' visited the museum with KS2 and below pupils, 90% compared to only 9% of KS3 and above. Teachers of KS2 and below are over-represented, as they make up 82% of the teachers in the sample as a whole. It would seem from this that primary teachers are being pro-active in developing the History curriculum. It is, of course, much easier for primary teachers to work in a cross-curricular way.

The evidence from the focus groups and case-studies sheds further light on the ways in which teachers use the museum in relation to the curriculum.

4.8 Talking to teachers about museums and the curriculum

In general most teachers were able to think of a museum visit as useful across the curriculum. Where teachers were experienced at using museums and/or very good museum/ school partnerships had been formed, we found evidence which showed that both the museums' and the teachers' expectations could be pushed to make creative and productive uses of museum resources for a variety of subject areas. In addition to subject areas which teachers traditionally use museums for, such as History, Art, and Science, KS3 and above teachers also talked about the use of the museum for Citizenship Studies and PSHE. We also were told about museums being used for Geography, ICT, Physical Education, French, Drama, and Music, A-level Psychology, and GCSE Business Studies.

Both of the focus groups involving teachers of KS2 and below talked about how the culture of teaching was changing and how this was leading to a more flexible engagement with the potential of the museum as a learning resource:

'[The] culture of teaching is changing again after the literacy and reading strategy, everything went into boxes and now it is changing again because it didn't work'.

We saw evidence in the focus groups and the case-studies of the impact of government policy as contained in *Excellence and Enjoyment*: *a strategy for Primary Schools*, *All our Futures: Creativity, Culture and Education* and the cultural offer for pupils outlined by DCMS in *Living Life to the Full* (see Section 1).[88] In general, teachers in 2005 appeared to view the curriculum as less of a constraint than had some teachers in 2003. The potential to use the museum for theme-based teaching is perceived more clearly than before.

We used our finding from the 2003 survey that only 35% of teachers thought it very likely that cross-curricular learning would occur on a museum visit to initiate discussion about cross-curricular use of the museum. Many teachers disagreed with this finding. One teacher's comment about a particular museum visit involving a whole school year group and many different subject teachers is particularly illustrative of this point:

'I'm surprised at that because I think that … our day has brought people together and made pupils and staff see… more links between subjects, because… even if you went with a blinkered view, like I'm thinking of History… looking at pictures from a previous time and talking about the subject matter and looking at costume… there's always something that comes up… and you can guarantee that students will be engaged by something that's completely different…'

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[88] Department for Education and Skills, 2003, *Excellence and Enjoyment: a strategy for Primary Schools,* DfES, London; Department for Culture, Media and Sport, 2005, *Living Life to the Full*, DCMS, London; National Advisory Committee on Creative and Cultural Education, 1999, *All our Futures: Creativity, Culture and Education,* DfES, London.

As for other types of museum use, we found that the more experienced the teacher with museums, the more likely they were to use the museum for cross-curricular purposes and the more articulate they were about this use.

We found that some teachers valued the way in which they could refocus the curriculum around a local museum. This allowed them to capitalise on local learning resources and make the National Curriculum more relevant;

'[The] curriculum is national… textbooks seldom give local examples, museums can give a more local perspective'.

The museum could also shape how the curriculum was managed. So, for instance, rather than devoting one lesson to a topic, the topic could be stretched over a number of weeks, incorporating other parts of the curriculum and a museum visit. This was possible because of the proximity of the museum to the school and the particular resources it offered.

The following are comments from teachers in the focus groups on their use of the museum in relation to the curriculum:

'Visits enhance the curriculum'.

'By coming out of school [we are] doing much more than just looking at the curriculum'.

'[There is] usually something at the museum which can be linked to the curriculum'.

'The [museum] workshops or the experience has been used as part of GCSE coursework or KS3 coursework'.

In one case-study we observed a museum educator teaching a KS2 class about portraiture as part of the KS2 art curriculum.

Fig 4.8a: A museum educator teaches a KS2 class about portraits

These pupils subsequently did their own self-portraits back in the classroom.

Fig 4.8b: Self-portrait on paper using scraffito

However, we also encountered some evidence where either because of poor facilitation, poor partnership or poor resources, uses of museums for the teaching of the curriculum was not particularly successful judged in terms of learning outcomes for the pupils. See Section 7 for further discussion.

4.9 Conclusions

This section considered how teachers use museums, and overall the picture is a very positive one. Museums are well used by the teachers, with most teachers who already use museums, using them frequently, and often in a sophisticated and open-ended manner. Primary teachers are more likely to use museums in a more diverse way, using the web-pages and borrowing materials as well as making visits. Primary teachers are also more likely to use museums for cross-curricular work. Those secondary teachers that use museums use them consistently.

4.9.1 General use of museums

The quantitative data tells us that 86% of teachers use cultural organisations on a regular basis. When comparing the data across Key Stages, 91% of primary teachers made regular visits to cultural organisations compared with 86% of secondary teachers.

Forty-three percent (43%) of all teachers were on their first visit to the museum on the day they completed Form A. A higher proportion are on their first visit in the Phase 2 museums (49%) compared to the Phase 1 museums (40%), and in the Phase 1 museums, the percentage of new teachers seems to have decreased since 2003. This may suggest that Phase 1 museums are building stable long-term partnerships with teachers, while the education services in the Phase 2 museums were successfully extending their services.

Primary teachers were more likely to be on their first visit (46%) than secondary teachers (36%). Over half of all teachers (58%) had organised the visit themselves.

Q.25 asked teachers to review their use of museums over the past two years; 86% said they had visited a museum as a teacher during this period, 64% said they had used the on-line resources of museums, and 40% had borrowed an object or a handling box. Ninety-two (92%) percent of secondary teachers had visited a museum in the past two years compared to 88% of primary teachers. Primary teachers were more likely to use resources such as on-line museum resources (69%) or have borrowed an object or handling box (45%) compared to secondary teachers (64% and 22% respectively).

It is interesting to see that teachers are using museum resources as well as visiting museums. Many museums in receipt of Renaissance funding, as the discussion in Section 8 (8.6) will show, have up-graded or improved their on-line provision, or have developed new web-based projects, curriculum links and advice on how to manage a school visit. With 64% of teachers already using museum web-pages and this being a frequent point of reference during discussions with teachers, museums are clearly working hard, with good

results, to exploit the new possibilities of ICT, and are in a good position to play their part in the developing DfES e-strategy.[89]

The focus group and case-studies enabled us to consider the attitudes and values of teacher that use museums more deeply. Teachers varied in the levels of sophistication with which they used museums. Many teachers in the focus groups and case-studies spoke at length about the unique and special experience that a museum visit provides for pupils and for teachers, and clearly this stimulates teachers to use museums. From this point of view, museums are well-placed to help deliver the 'cultural offer' being promoted by DfES.

The type of school at which teachers work affects the way they use museums, with primary teachers being more likely to make regular visits to cultural organisations (91%) than secondary teachers (86%) and also more likely to use museums to support their work. However, there is some evidence that once secondary teachers see the value of museums, they are likely to use them consistently. Secondary teachers are less likely to be 'new' to the museum, although they are likely to come from schools that make fewer regular visits to cultural organisations.

4.9.2 Museums and the curriculum

The vast body of work that takes place in these museums was linked to the curriculum. However, since 2003 there has been a slight reduction in curriculum-related work and an enormous increase in interdisciplinary work.

When asked if the work at the museum today was linked to the curriculum, 90% agreed that it was, compared with 94% in 2003, with more curriculum-related work being carried out in the Phase 1 museums than in the Phase 2 museums (94% of teachers compared with 91%). More teachers of KS2 and below pupils linked their visit directly to the curriculum, 94% compared to 87% teachers of KS3 and above. Secondary teachers are more likely to use museums without a specific curriculum focus. It is also very likely that teachers from special schools use museums in open-ended ways that are not necessarily directly linked to the curriculum.

One of the strongest findings from the research was the large increase in the use of museums for interdisciplinary and cross-curricular work; teachers working on interdisciplinary themes have increased from 4% in 2003 to 27% in 2005. Ninety percent (90%) of these teachers are primary teachers, which is perhaps not surprising considering how much easier it is for primary teachers to work across subject boundaries. The research shows how primary teachers are taking advantage of museums and their resources to engage their pupils in learning, to stretch them and to open up their imaginations by making links

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[89] Department for Education and Skills, 2005, *Harnessing Technology: Transforming Learning and Children's Services*, DfES, London, http://www.dfes.gov.uk/publications/e-strategy/

across subject areas, and by providing their pupils with a range of different ways to learn.

History remains the main subject that all teachers wish to work on in museums, with 51% working on History-related themes, compared with 70% in 2003. History-based themes also made up the basis for 78% of the cross-curricular work. Eleven percent (11%) of the teachers were working on Art and Design, compared with 15% in 2003; other subject areas made up very tiny percentages. Museums seem to be used almost exclusively by teachers working on historical matters, although this is now more likely to be approached in a cross-curricular way, or to be used to open up links into other subject areas. It is surprising that the use of museums for Art and Design has declined but this may have been affected by the types of museum in the increased sample.

It became clear during discussions with teachers that teaching cultures were changing, due at least in part to the impact of new government initiatives such as *Excellence and Enjoyment*. The freeing up of the curriculum potentially offers new opportunities for schools and museums to work in partnership. That teachers, and especially teachers working on History-based themes in the primary school, are beginning to use museums in a more creative and open-ended way is clear from the rapid rise in interdisciplinary themes. The enhanced focus on outcomes promoted by *Every Child Matters* also seems to have encouraged teachers to analyse their museum use more critically and to assess benefits rather than describe process.

SECTION FIVE

THE VALUE OF MUSEUMS TO TEACHERS

5.0 Introduction

This section examines how teachers value museums. It presents evidence of the importance of museums to teachers, and the importance in their view of the Generic Learning Outcomes that may result for their pupils from a museum visit.

The importance of the five GLOs (Q.19) is examined from a number of different perspectives and compared with the answers in the 2003 study. Two important variables are identified which impact on teachers' views. These are the age of the pupils with whom teachers are working, and whether or not the work carried out at the museum is linked to the curriculum.

The importance of museums to teachers is examined, and here, the degree of importance is affected by whether or not the work at the museum is curriculum-linked. As we saw in Section 4, the use of museums for curriculum-related work has fallen slightly, and this may account for an apparent drop in the importance of museums to teachers. Discussions in the focus groups and case-studies confirm the continued high importance of museums for teachers, especially in offering something different from what can be achieved in school and in opening up local issues. Museums also contribute to the professional development of teachers.

This Section also reviews the satisfaction of teachers with their museum experience. Substantial difficulties were raised in discussions with teachers in using museums, some of which can be addressed by museums, and some which are more generic. However, the questionnaire shows that the vast majority of teachers are satisfied with their museum visit, in spite of the difficulties. Most teachers are very confident about using museums.

5.1 The value of the five GLOs

The Teachers' Questionnaire, Form A (Q.19) asked teachers to rate the importance of each of the five GLOs in relation to a scale running from 'very important' to 'not at all important'. The teachers were not expected to grade the outcomes against each other, but to value them independently.

This year a column for 'don't know' was added to the 5-point scale ranging from 'very important' to 'not at all important', in order to make a clearer distinction between teachers who did not complete this question (missing values) and those teachers that left the relevant box blank because they did not understand the question or were not quite sure about the answer.

In the event, the 'don't know' box was very rarely used by teachers. As the chart below shows, this value stands at 0%, except for Action, Behaviour, Progression, where 1% of teachers ticked 'don't know'. It is not clear whether teachers were not completing some or all of Q.19 because they did not understand it, and just preferred to do this rather than tick the 'don't know' box. The chart below shows that missing values stand at 5% and 6% except for Action, Behaviour, Progression, where they suddenly grow to 15%. This does seem to indicate that some teachers felt unclear about this particular GLO, and just left the box blank.

♦ Q.19 asked: 'For each of the following potential outcomes from the use of the museum please could you rate the importance of each one in your view: (tick one box for each)'.

Fig 5.1a: Form A, Q.19: 'For each of the following potential outcomes from the use of the museum, please could you rate the importance of each one in your view?', 2005

	Enjoyment Inspiration, Creativity	Knowledge and Understanding	Attitudes and Values	Action Behaviour Progression	Skills
■ Missing	5%	5%	6%	15%	6%
■ Don't know	0%	0%	0%	1%	0%
■ Not at all important	0%	0%	0%	0%	0%
□ Not very important	0%	0%	0%	1%	1%
□ Neither	1%	1%	2%	3%	4%
■ Important	18%	27%	31%	33%	43%
■ Very important	76%	68%	61%	48%	46%
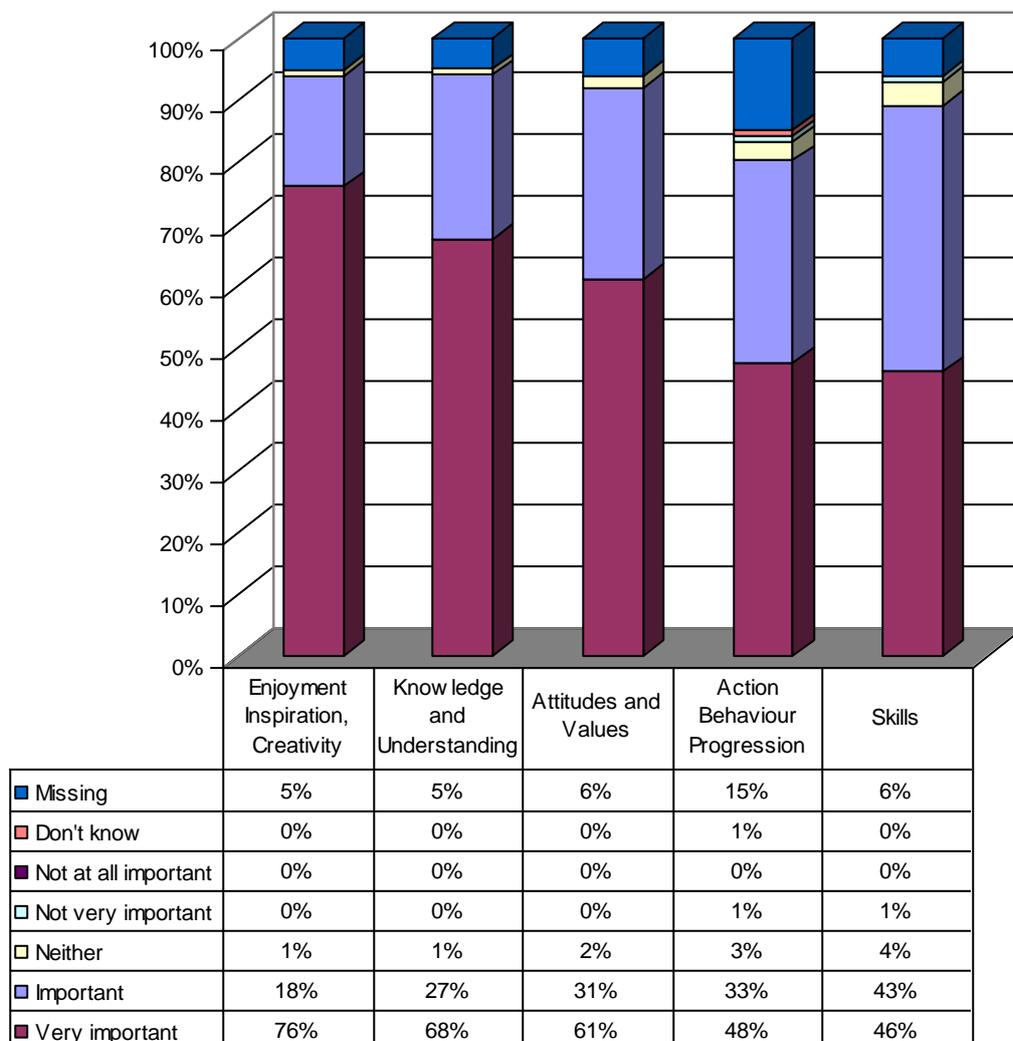
Base: all teachers' responses to Q.19: 'For each of the following potential outcomes from the use of the museum, please could you rate the importance of each one in your view?', 2005 (1632)

The first thing to note about the responses to Q.19 is that, looking at the 'very important' responses, there is a clear scale of relative importance of the GLOs. Enjoyment, Inspiration, Creativity is the GLO that more teachers value as 'very important'.

- Enjoyment, Inspiration, Creativity   76%
- Increase or change in Knowledge and Understanding   68%
- Change or development in Attitudes and Values   61%
- Action, Behaviour, Progression   48%
- Increase in Skills   46%

Reviewing the importance accorded to the GLOs by teachers using museums in the Phase 1 and the Phase 2 Hubs reveals very little difference. In the chart below, the ratings of the teachers are compared across the Phase 1 and the Phase 2 museums, using the 'very important' values for clarity.

Table 5.1b: Comparing the percentages of teachers who stated 'very important' across type of museum

	All museums 2005	Phase 1 2005	Phase 2 2005
Enjoyment, Inspiration, Creativity	76%	76%	76%
Knowledge and Understanding	68%	68%	67%
Attitudes and Values	61%	61%	60%
Action, Behaviour, Progression	48%	51%	45%
Skills	46%	46%	45%

Base: all teachers' responses to Q.19:'For each of the following potential outcomes from the use of the museum, please could you rate the importance of each one in your view?', 'very important' only, 2005 (1632)

It is illuminating to consider all the positive values together. Taking both 'very important' and 'important' together, the huge enthusiasm for museums becomes very clear, while the hierarchy of positive outcomes become less differentiated:

- Enjoyment, Inspiration, Creativity   94%
- Increase or change in Knowledge and Understanding   95%
- Change or development in Attitudes and Values   92%
- Increase in Skills   89%
- Action, Behaviour, Progression   81%

When comparing the 2003 and 2005 study it is clear that when all positive values are added together, the total percentage of positive teachers compares consistently with the first study, except for Action, Behaviour, Progression which is affected by a large increase in the proportion of 'missing' responses, rising from 4% to 15% in 2005.

When comparing the 2003 and 2005 study it is clear that when all positive values are added together, the total percentage of positive teachers compares consistently with the first study, except for Action, Behaviour, Progression which is affected by a large increase in the proportion of 'missing' responses, rising from 4% to 15% in 2005.

Fig 5.1c: Form A, Q.21: 'For each of the following potential outcomes from the use of the museum, please could you rate the importance of each one in your view?', 2003

	Enjoyment, Inspiration, Creativity	Knowledge and understanding	Attitudes and values	Action, behaviour, progression	Skills
■ Not stated	3%	3%	4%	4%	4%
■ Not at all important	0%	0%	1%	0%	0%
□ Not very important	0%	0%	0%	0%	1%
□ Neither	1%	1%	2%	4%	6%
■ Important	15%	24%	35%	35%	44%
■ Very important	81%	72%	58%	57%	44%
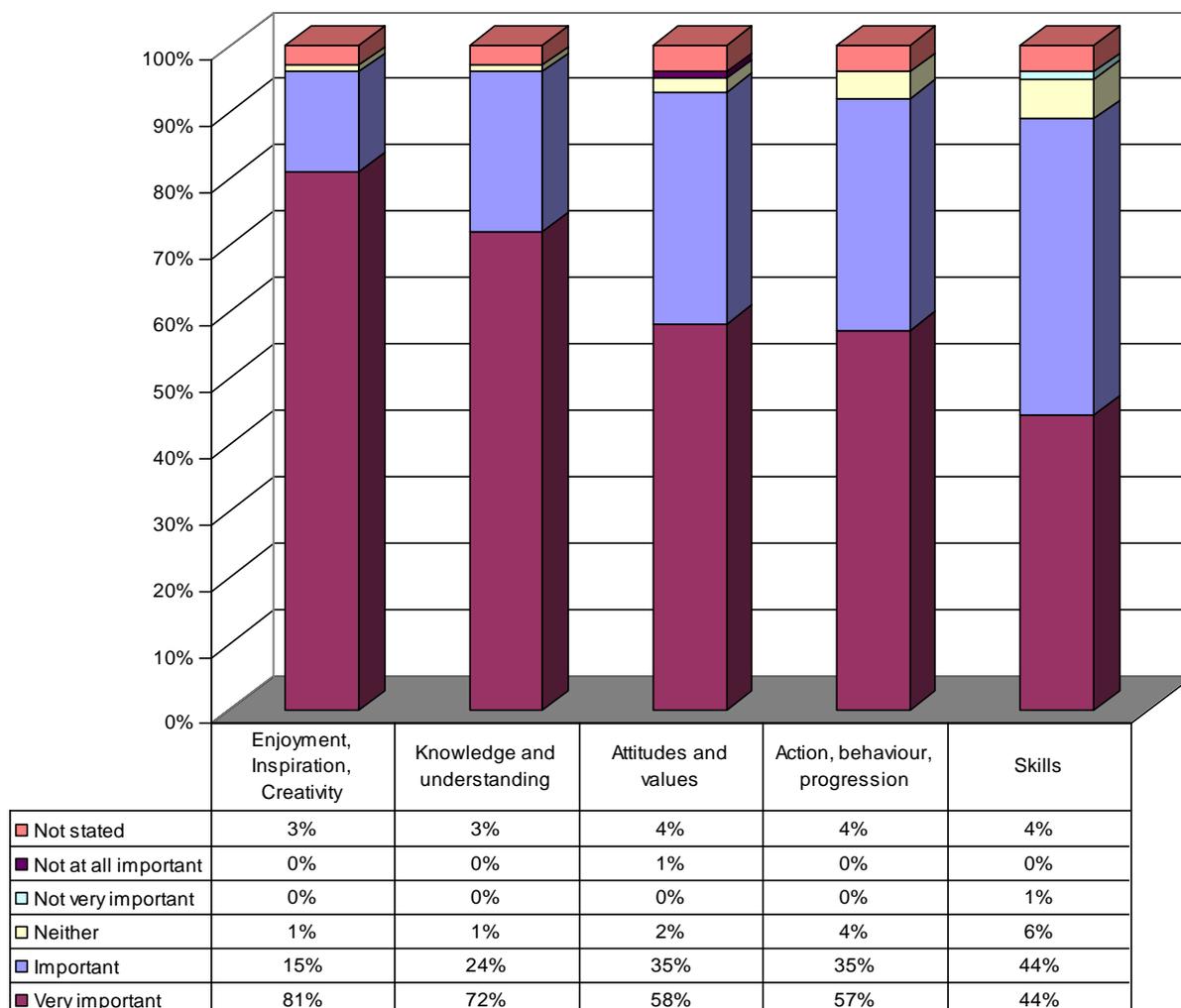
Base: all teachers' responses to Q.21: 'For each of the following potential outcomes from the use of the museum, please could you rate the importance of each one in your view?', 2003 (936)

However, there does appear to be some difference in teachers rating the GLOs 'very important' between the two studies. In order to explore this issue further the GLOs were considered individually for 2003 and 2005 with 'don't know' and 'missing' values removed. 'Not very important' and 'not at all important' categories contained very small numbers and so were combined to make an 'unimportant' category to enable a chi square test to be performed.

The test showed that, when all categories of response were considered, there were no significant differences in the teachers' views of the importance of each GLO when answers in 2003 and 2005 are compared.

However, when the analysis is restricted to those responding 'very important' and 'important' only, it appears that Attitudes and Values have increased in importance by 4%, while the importance of Enjoyment, Inspiration, Creativity has decreased by 3%.

In order to investigate these findings further, they are analysed in relation to first visit, link to the curriculum and Key Stage.

These analyses are presented in the next few pages.

Teachers' rating Knowledge and Understanding 'very important' shows a slight decrease in 2005, however this difference is too small to be considered statistically significant.[90]

Fig 5.1d: Form A, Q.19: Knowledge and Understanding, 2005 compared with Q.21: Knowledge and Understanding, 2003

	Very important	Important	Neither	Unimportant
■ 2005	71%	28%	1%	0%
■ 2003	74%	25%	1%	0%
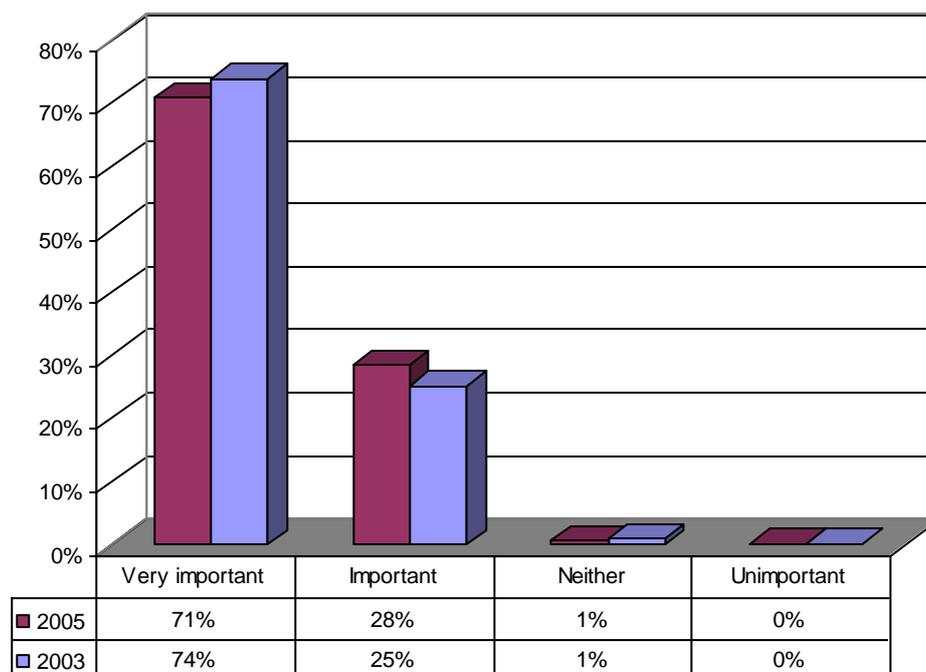
Base: all teachers' responses Q.19a: Knowledge and Understanding, 2005 (1554); Q.21a: Knowledge and Understanding, 2003, (908), missing and 'don't know' excluded.

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[90] There is no significant difference in teachers' rating the importance of Knowledge and Understanding between 2003 and 2005 ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 2462)= 3.45, p >0.05.

Teachers rating Skills as 'very important' can be seen to increase by 2% in 2005; this is mainly accounted for by the decrease in teachers rating skills as neither 'important' or 'unimportant', again overall these differences are too small to be considered statistically significant.[91]

Fig 5.1e: Form A, Q.19: Skills, 2005 compared with Q.21: Skills, 2003

	Very important	Important	Neither	Unimportant
2005	48%	46%	4%	1%
2003	46%	46%	7%	1%
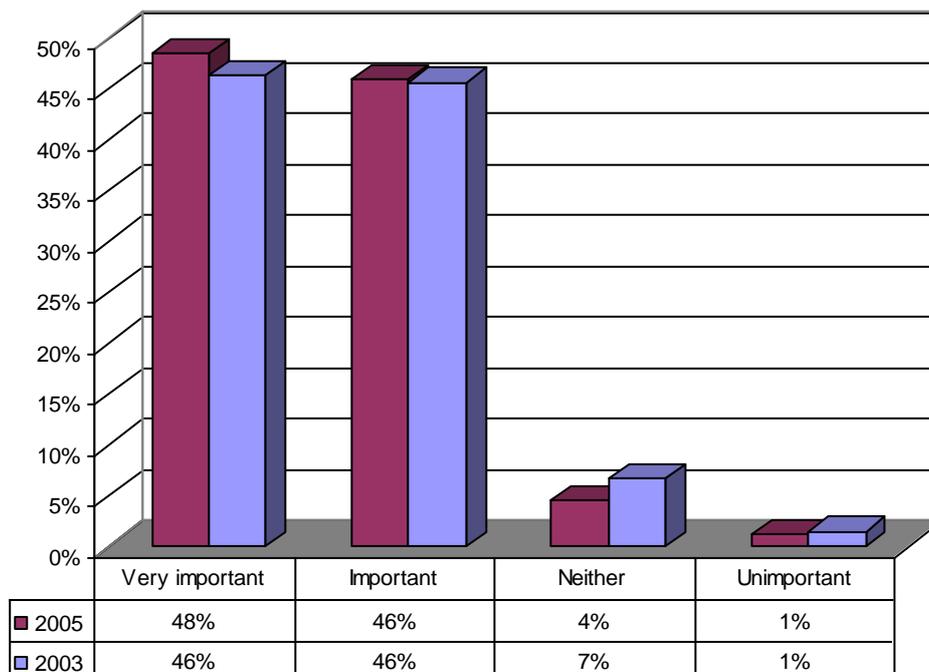
Base: all teachers' responses Q.19b: Skills 2005 (1534); Q.21b: Skills, 2003 (897), missing and 'don't know' excluded.

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[91] There is no significant difference in teachers' rating the importance of Skills between 2003 and 2005 ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 2431)=6.03, p >0.05.

A comparison of teachers rating of Attitudes and Values between 2005 and 2003 shows an increase in the percentage of teachers rating the GLO 'very important'. However, when the overall responses are considered no significant difference is identified.[92]

Fig 5.1f: Form A, Q.19: Attitudes and Values, 2005 compared with Q.21: Attitudes and Values, 2003

	Very important	Important	Neither	Unimportant
■ 2005	65%	33%	2%	0%
■ 2003	60%	37%	3%	0%
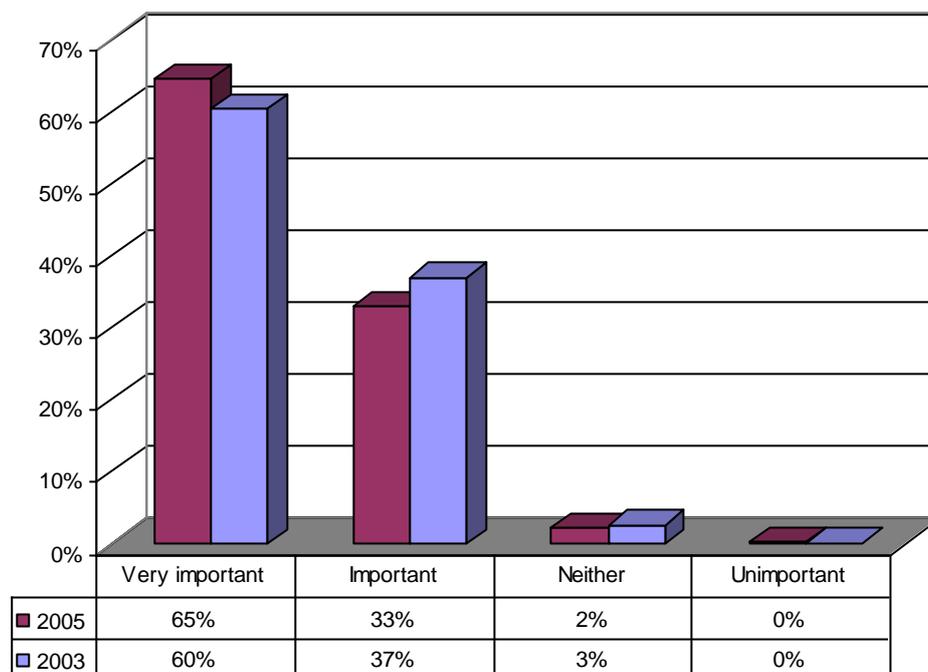
Base: all teachers' responses Q.19c: Attitudes and Values, 2005 (1535); Q.21c: Attitudes and Values, 2003 (899), missing and 'don't know' excluded.

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[92] There is no significant difference in teachers' rating the importance of Attitudes and Values between 2003 and 2005 ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 2434)=5.62, p >0.05.

When Enjoyment, Inspiration, Creativity is compared between the two studies the proportion of teachers rating it as 'very important' is slightly lower in 2005. However, when teachers' ratings are considered overall for this GLO no significant difference is found.[93]

Fig 5.1g: Form A, Q.19: Enjoyment, Inspiration, Creativity, 2005 compared with Q.21: Enjoyment, Inspiration, Creativity, 2003

	Very important	Important	Neither	Unimportant
2005	80%	19%	1%	0%
2003	83%	16%	1%	0%
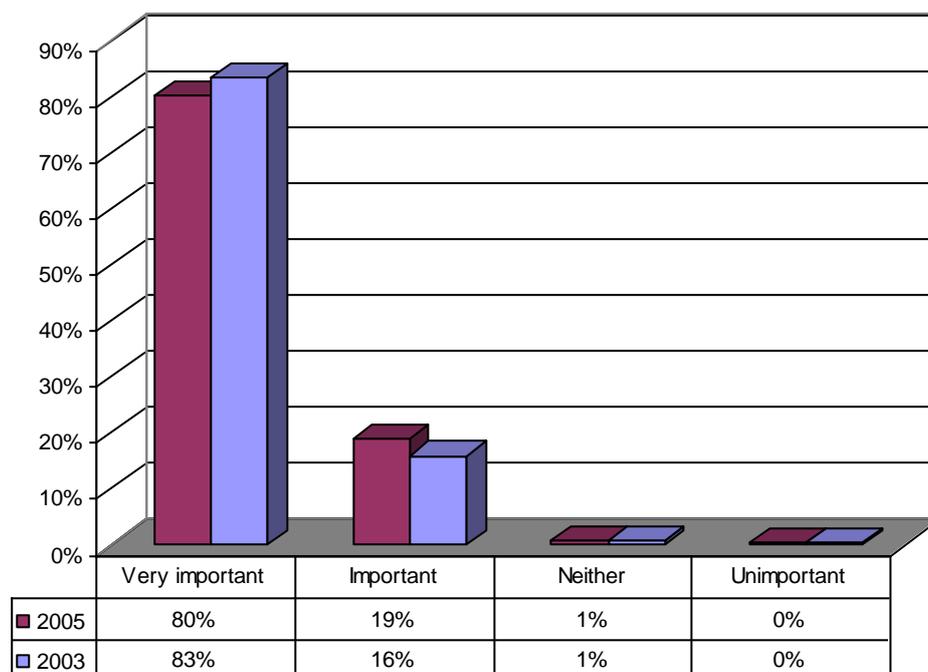
Base: all teachers' responses Q.19d: Enjoyment, Inspiration, Creativity, 2005 (1544); Q.21d: Enjoyment, Inspiration, Creativity, 2003 (906), missing and 'don't know' excluded.

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[93] There is no significant difference in teachers' rating the importance of Enjoyment, Inspiration, Creativity between 2003 and 2005 ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 2450)=3.89, p >0.05.

Teachers' rating of Action, Behaviour, Progression in 2005 shows a small decrease in the 'very important' category, with slightly more teachers' rating the GLO as 'unimportant' in 2005. Again overall the differences cannot be considered statistically significant.[94]

Fig 5.1h: Form A, Q.19: Action, Behaviour, Progression, 2005 compared with Q.21: Action, Behaviour, Progression, 2003

	Very important	Important	Neither	Unimportant
2005	57%	39%	3%	1%
2003	59%	37%	4%	0%
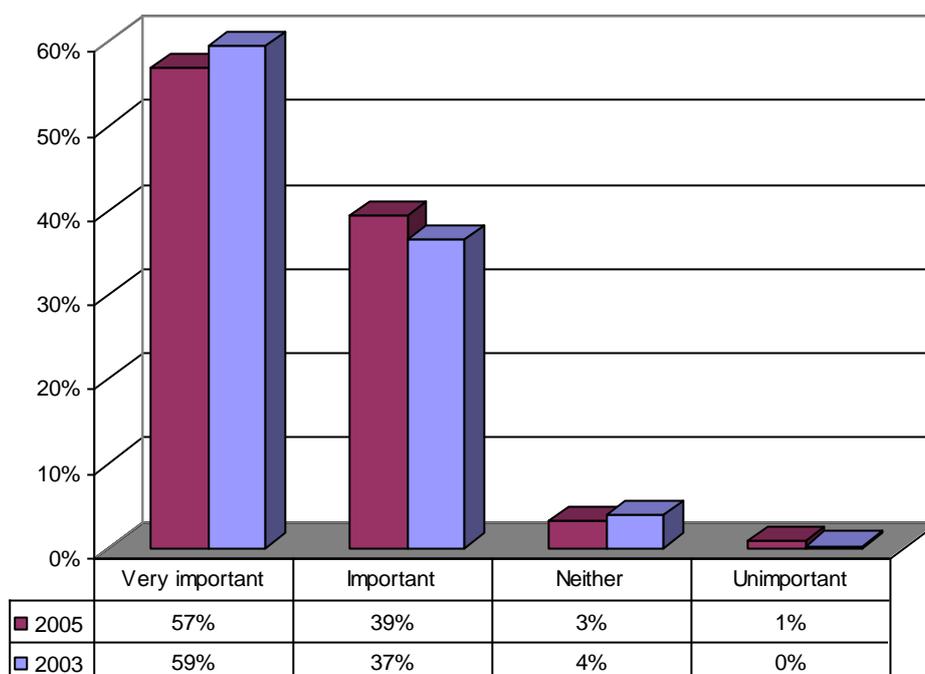
Base: all teachers' responses Q.19e: Action, Behaviour, Progression, 2005 (1381); Q.21e: Action, Behaviour, Progression, 2003 (895), missing and 'don't know' excluded.

When all categories of teachers' responses are considered between the two studies no significant differences can be identified. However, an inspection of the graphs and the observed and expected figures in the chi square test indicates that the proportion of teachers responding 'neither' and 'unimportant' remain relatively stable between the two studies. Numbers of teachers' responses in these categories were also very small. Differences in percentages of teachers' responses between 2003 and 2005 seem to be mainly restricted to the 'very important' and 'important' categories. In order to investigate these differences further a chi square test was carried out comparing the five GLOs between 2003 and 2005 but restricting the analysis to only the 'very important' and 'important' categories. The results of this analysis revealed no significant difference between 2003 and 2005 for;

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[94] There is no significant difference in teachers' rating the importance of Action, Behaviour, Progression between 2003 and 2005 ('missing' and 'don't know' categories excluded).   Chi square (degrees of freedom 3, n= 2276)=5.65, p >0.05.

Knowledge and Understanding[95], Skills[96], and Action, Behaviour, Progression.[97] However, Attitudes and Values[98] and Enjoyment, Inspiration, Creativity[99] do show a significant difference between the two studies as illustrated in the graphs below.

Fig 5.1i: Form A, Q.19: Attitudes and Values 2005 and Q.21: Attitudes and Values 2003, teachers responding 'very important' and 'important' categories only

	Very important	Important
2005	66%	34%
2003	62%	38%
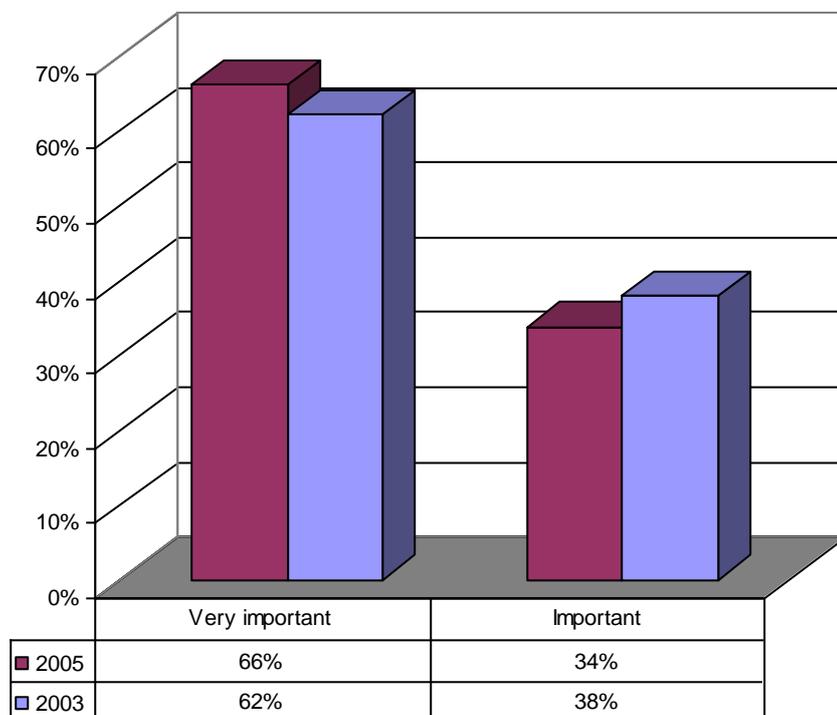
Base: all teachers responding 'very important' and 'important' Q.19c: Attitudes and Values, 2005 (1497); Q.21c: Attitudes and Values, 2003 (875)

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[95] There is no significant difference in teachers rating Knowledge and Understanding 'very important' or 'important' between 2003 and 2005 ('missing', 'don't know', 'neither' and 'unimportant' categories excluded). Chi square (degrees of freedom 1, n=2441)=2.99, p >0.05.

[96] There is no significant difference in teachers rating Skills 'very important' or 'important' between 2003 and 2005 ('missing', 'don't know', 'neither' and 'unimportant' categories excluded). Chi square (degrees of freedom 1, n=2271)=0.21, p >0.05.

[97] There is no significant difference in teachers rating Action, Behaviour, Progression 'very important' or 'important' between 2003 and 2005 ('missing', 'don't know', 'neither' and 'unimportant' categories excluded). Chi square (degrees of freedom 1, n=2186)=1.77, p >0.05.

[98] There is a significant difference in teachers rating Attitudes and Values 'very important' or 'important' between 2003 and 2005 ('missing', 'don't know', 'neither' and 'unimportant' categories excluded). Chi square (degrees of freedom 1, n=2372)=4.15, p <0.05.

[99] There is a significant difference in teachers rating Enjoyment, Inspiration, Creativity 'very important' or 'important' between 2003 and 2005 ('missing', 'don't know', 'neither' and 'unimportant' categories excluded). Chi square (degrees of freedom 1, n=2425)=3.85, p <0.05.

Teachers rating Attitudes and Values as 'very important' have increased by 4% in 2005; this change can be regarded as statistically significant. Conversely teachers rating Enjoyment, Inspiration, Creativity as 'very important' has decreased by 3% in 2005.

Fig 5.1j: Form A, Q.19: Enjoyment, Inspiration, Creativity 2005 and Q.21: Enjoyment, Inspiration, Creativity, 2003, teachers responding 'very important' and 'important' categories only

	Very important	Important
2005	81%	19%
2003	84%	16%
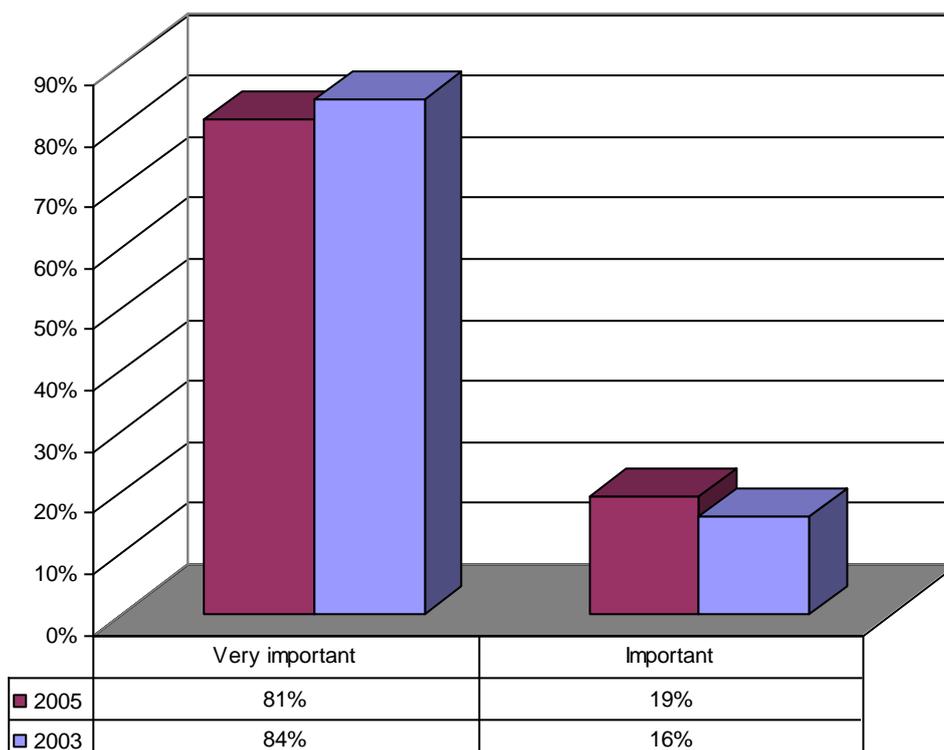
Base: all teachers responding 'very important' and 'important' Q.19d: Enjoyment, Inspiration, Creativity, 2005 (1528); Q.21d: Enjoyment, Inspiration, Creativity, 2003 (897)

In order to probe what this might mean, the responses to Q.19 were examined further to compare the responses of:

- primary and secondary teachers
- teachers on their first visit to the museum with teachers who had visited previously
- teachers whose work was linked to the curriculum with those whose work was not linked to the curriculum.

The tables of cross-tabulations are displayed below, with each of the GLOs treated separately for the sake of clarity.

♦ Q.19: cross-tabbed by Key Stage

Fig 5.1k: Form A, Q.19: Enjoyment, Inspiration, Creativity by Q.10: Key Stage groups, 2005[100]
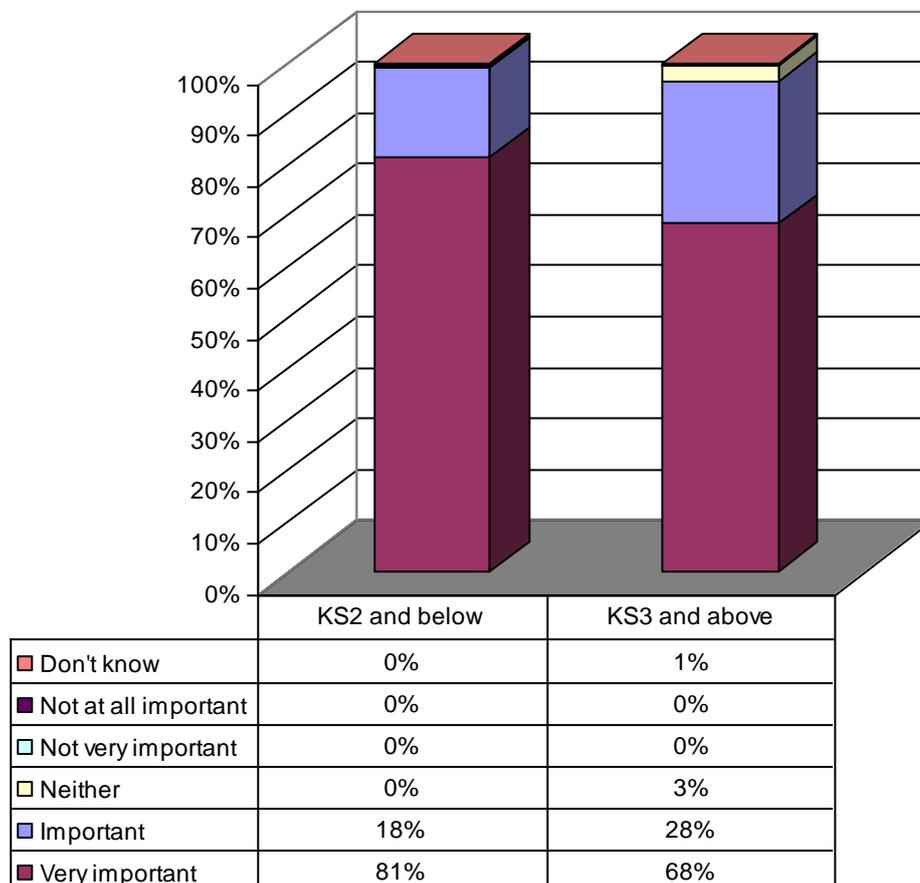
	KS2 and below	KS3 and above
☐ Don't know	0%	1%
■ Not at all important	0%	0%
☐ Not very important	0%	0%
☐ Neither	0%	3%
☐ Important	18%	28%
■ Very important	81%	68%

Base: all teachers' responses Q.19: Enjoyment, Inspiration, Creativity by Q.10: Key Stage groups, missing and mixed Key Stage groups excluded, 2005 (1325 KS2 and below, 196 KS3 and above)

Primary teachers value the enjoyment and inspiration to be gained in museums a great deal more highly than do secondary teachers.

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[100] Chi square analysis was not performed on this cross-tab because of the very low number of responses in the 'not important' and 'neither' categories.

Fig 5.1I: Form A, Q.19: Knowledge and Understanding by Q.10: Key Stage groups, 2005[101]

	KS2 and below	KS3 and above
■ Don't know	0%	0%
■ Not at all important	0%	0%
□ Not very important	0%	0%
□ Neither	1%	1%
■ Important	27%	34%
■ Very important	72%	65%
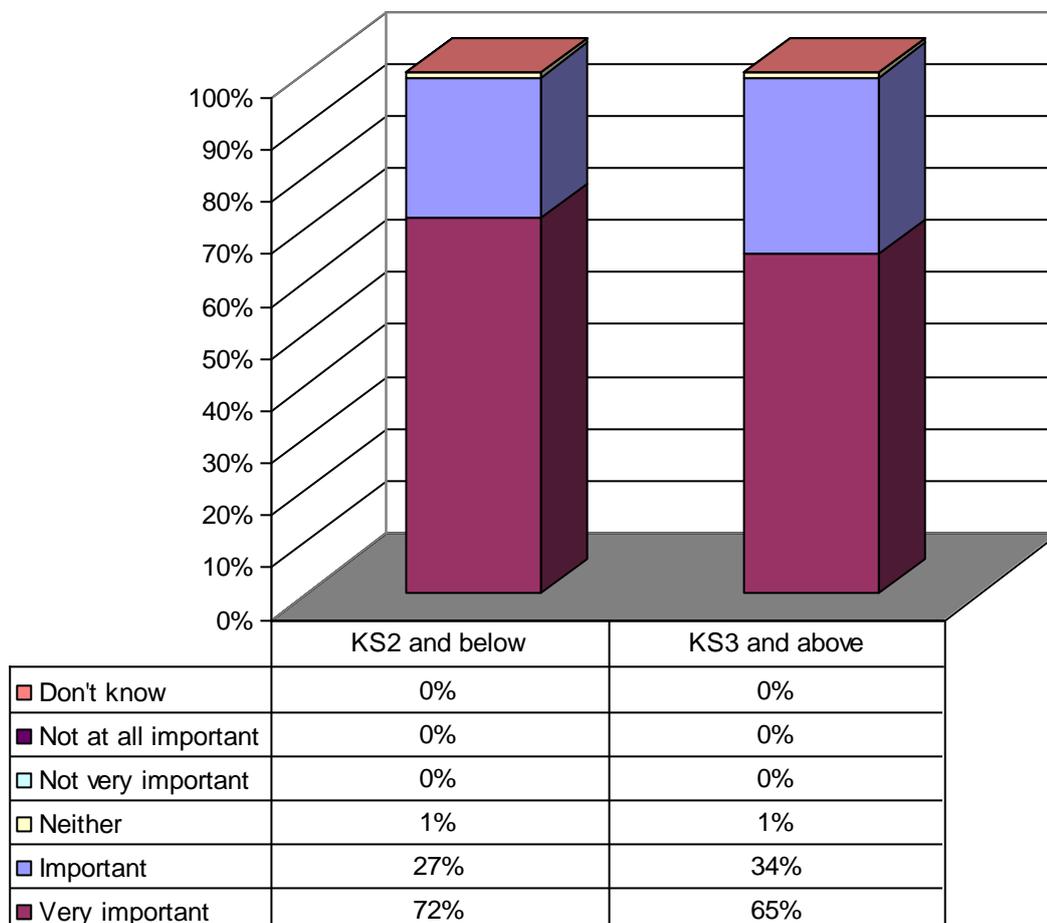
Base: all teachers' responses Q.19 Knowledge and Understanding and Q.10 Key Stage groups, missing and mixed Key Stage groups excluded, 2005 (1332 KS2 and below, 197 KS3 and above)

Primary teachers also value the Knowledge and Understanding their pupils may gain more highly than secondary teachers.

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[101] Chi square analysis was not performed on this cross-tab because of the very low number of responses in the 'not important' and 'neither' categories.

Fig 5.1m: Form A, Q.19: Attitudes and Values by Q.10: Key Stage groups, 2005[102]

	KS2 and below	KS3 and above
■ Don't know	0%	1%
■ Not at all important	0%	0%
□ Not very important	0%	1%
□ Neither	2%	2%
■ Important	31%	43%
■ Very important	66%	55%
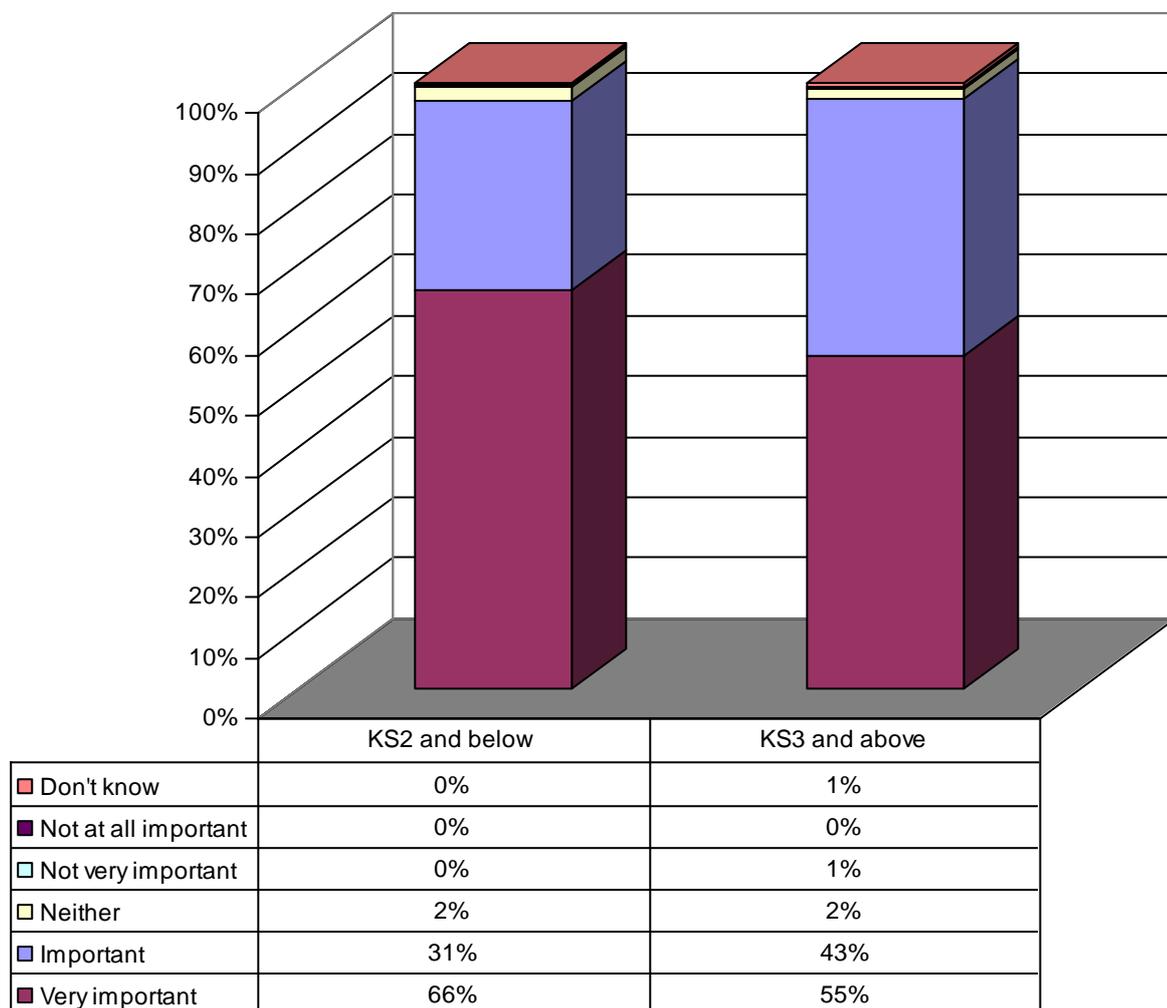
Base: all teachers' responses Q.19 Attitudes and Values and Q.10 Key Stage groups, missing and mixed Key Stage groups excluded, 2005 (1316 KS2 and below, 195 KS3 and above)

Primary teachers value the potential change or development in Attitudes and Values more highly than secondary teachers.

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[102] Chi square analysis was not performed on this cross-tab because of the very low number of responses in the 'not important' and 'neither' categories.

Fig 5.1n: Form A, Q.19: Actions, Behaviour, Progression by Q.10: Key Stage groups, 2005

	KS2 and below	KS3 and above
🟥 Don't know	1%	2%
⬛ Not at all important	0%	0%
⬜ Not very important	1%	1%
⬜ Neither	3%	3%
🟦 Important	38%	44%
🟥 Very important	58%	49%
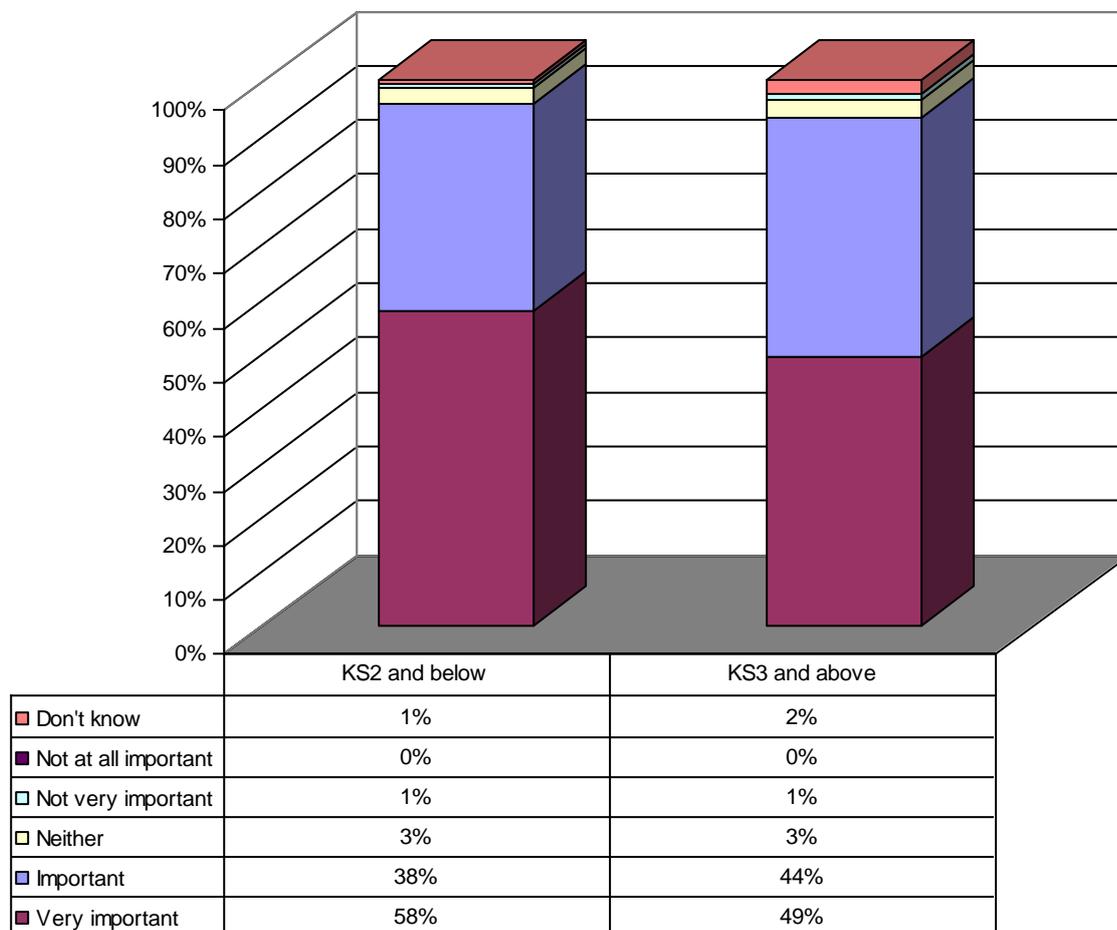
Base: all teachers' responses Q.19: Actions, Behaviour, Progression and Q.10 Key Stage groups, missing and mixed Key Stage groups excluded, 2005 (1191 KS2 and below, 175 KS3 and above)

While primary teachers appear to value the activities that their pupils may engage in and the progression that may result slightly more highly than secondary teachers this difference is not statistically significant.[103]

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[103] There is no significant difference between KS2 and below and KS3 and above teachers' rating of the importance of Action, Behaviour, Progression ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 1355) = 3.993, p 0.26 (>0.05).

Fig 5.1o: Form A, Q.19: Skills by Q.10: Key Stage groups, 2005

	KS2 and below	KS3 and above
□ Don't know	0%	0%
■ Not at all important	0%	0%
□ Not very important	1%	3%
□ Neither	4%	6%
□ Important	46%	46%
■ Very important	49%	44%
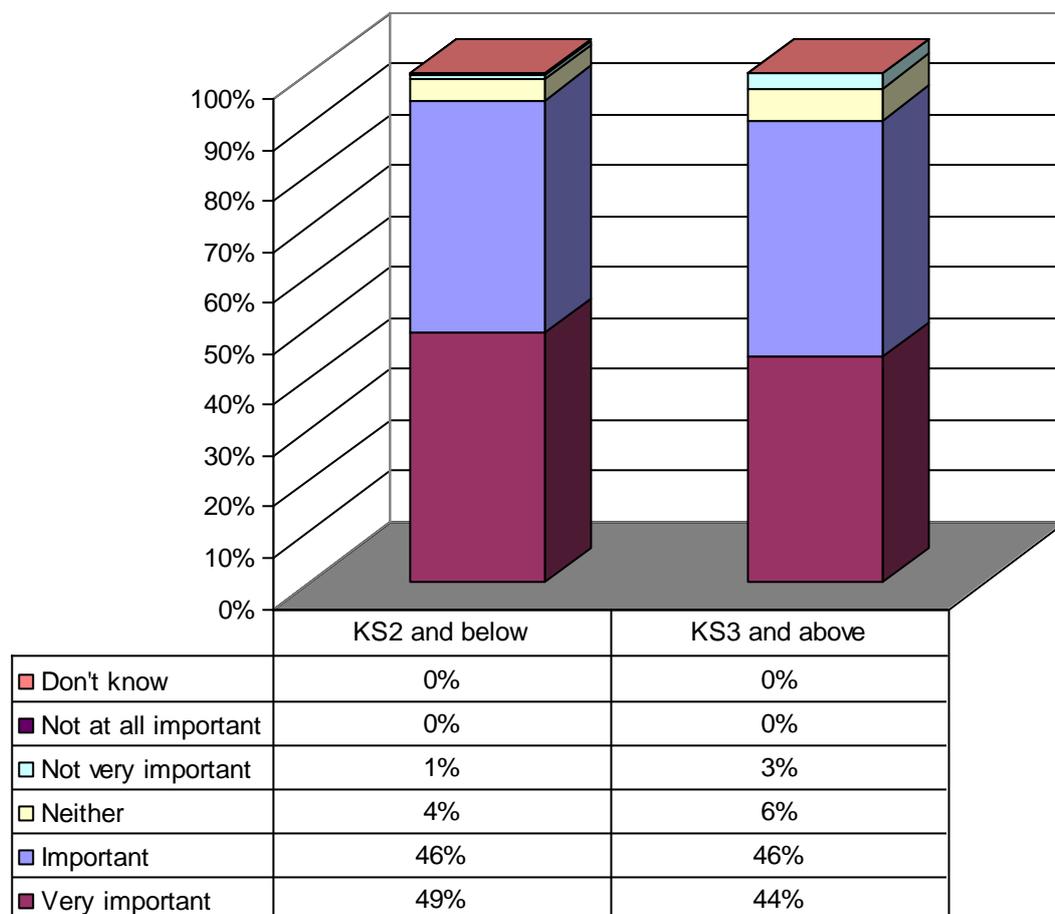
Base: all teachers' responses Q.19: Skills and Q.10 Key Stage groups, missing and mixed Key Stage groups excluded, 2005 (1317 KS2 and below, 194 KS3 and above)

The attitudes of primary and secondary teachers show a significant difference when it comes to considering a development in Skills following a museum visit.[104] This difference is mainly accounted for by more KS2 and below teachers rating Skills as 'very important' and less KS2 and below teachers rating Skills as 'unimportant' or neither 'important' or 'unimportant'.

Considering the different ways in which teachers working at different Key Stages value the outcomes of museum-based learning, it is very clear that primary teachers consistently regard the five potential types of outcome more important than the secondary teachers, and this is particularly so in the case of Enjoyment, Inspiration, Creativity and Knowledge and Understanding. If there were a larger proportion of secondary teachers completing Form A in 2005 than in 2003, this might have accounted for the apparent drop in

[104] There is a significant difference between KS2 and below and KS3 and above teachers' rating of the importance of Skills ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 1506)= 10.11, p 0.018 (<0.05).

importance of the GLOs. However, there are less secondary teachers than in 2003, so if anything, the importance accorded to the GLOs should have risen in 2005, and this has not happened.

♦   Q. 19: cross-tabbed by first visit

Fig 5.1p: Form A, Q.19: Enjoyment, Inspiration, Creativity by Q.20: 'Is this your first visit (as a teacher) to a museum with this class?', 2005

	Yes	No
■ Don't know	0%	0%
■ Not at all important	0%	0%
□ Not very important	0%	0%
□ Neither	1%	1%
■ Important	20%	18%
■ Very important	79%	81%
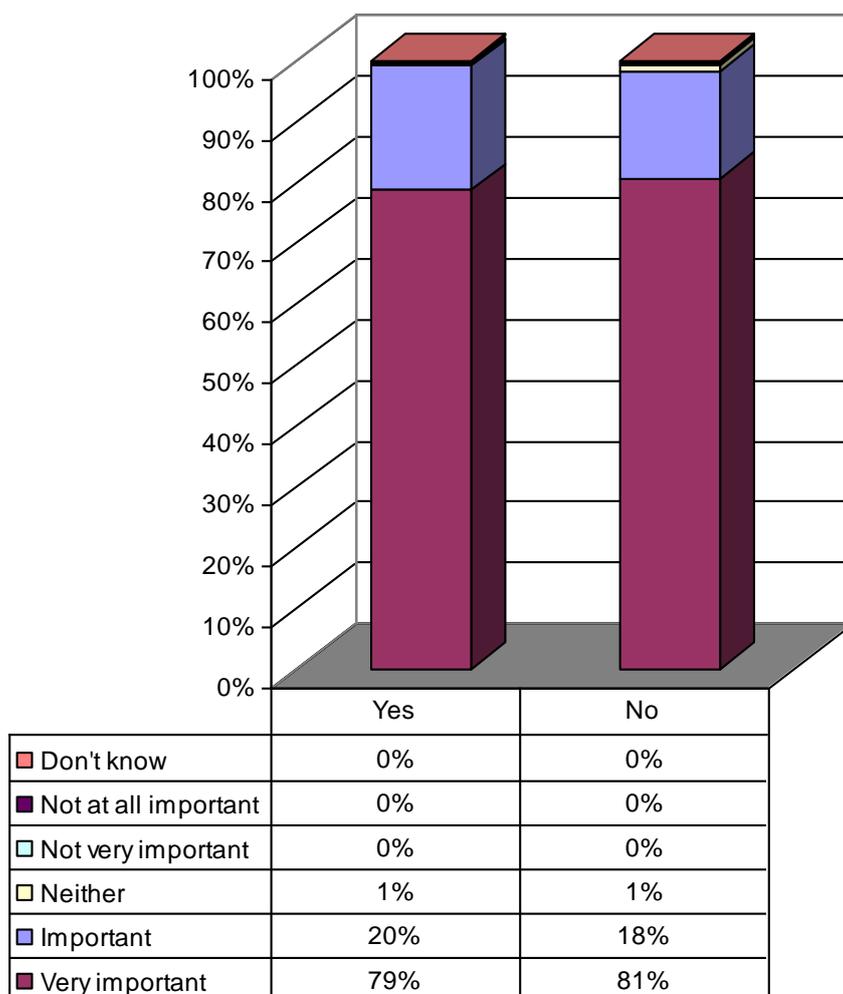
Base: all teachers' responses Q.19: Enjoyment, Inspiration, Creativity and Q.20: 'Is this your first visit (as a teacher) to a museum with this class?', missing excluded, 2005, (yes 684, no 844)

While teachers on their first visit to the museum were very likely to think Enjoyment, Inspiration, Creativity was 'very important', those that were not on their first visit were even more likely to think Enjoyment, Inspiration, Creativity was 'very important'. However, these differences are too small to be considered statistical significant.[105]

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[105] There is not a significant difference when teachers rating the importance of Enjoyment, Inspiration, Creativity is compared by teachers on their first visit and

Fig 5.1q: Form A, Q.19: Knowledge and Understanding by Q.20: 'Is this your first visit (as a teacher) to a museum with this class?', 2005

	Yes	No
■ Don't know	0%	0%
■ Not at all important	0%	0%
□ Not very important	0%	0%
□ Neither	1%	1%
■ Important	31%	26%
■ Very important	68%	73%
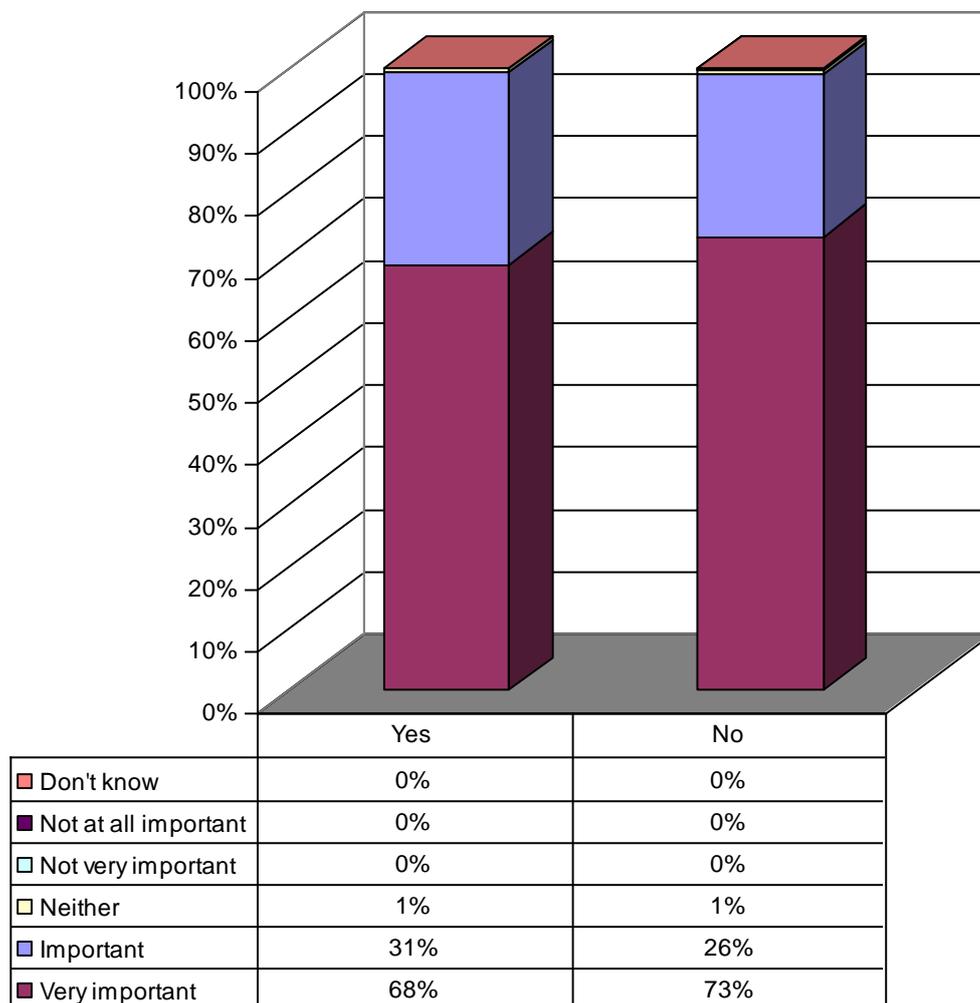
Base: all teachers' responses Q.19: Knowledge and Understanding and Q.20: 'Is this your first visit (as a teacher) to a museum with this class?', missing excluded, 2005, (yes 690, no 848)

Those teachers who were not on their first visit value Knowledge and Understanding more highly than those who were on their first visit, again though these differences are too small to be considered statistically significant.[106]

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teachers not on their first visit ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 1524)= 3.95, p 0.267 (>0.05).
[106] There is not a significant difference when teachers rating the importance of Knowledge and Understanding is compared by teachers on their first visit and teachers not on their first visit ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 1535)= 5.09, p 0.165 (>0.05).

Fig 5.1r: Form A, Q.19: Attitudes and Values by Q.20: 'Is this your first visit (as a teacher) to a museum with this class?', 2005

	Yes	No
☐ Don't know	0%	0%
■ Not at all important	0%	0%
☐ Not very important	0%	0%
☐ Neither	3%	2%
☐ Important	32%	34%
■ Very important	65%	64%
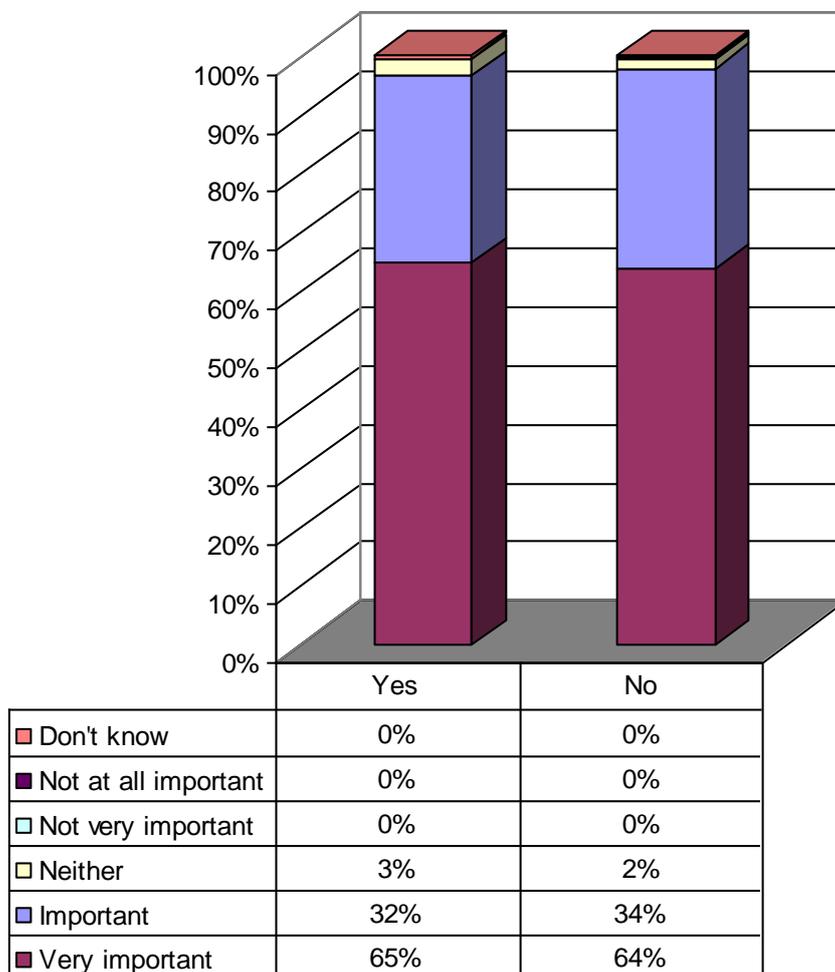
Base: all teachers' responses Q.19**:** Attitudes and Values and Q.20:'Is this your first visit (as a teacher) to a museum with this class?', missing excluded, 2005, (yes 685, no 837)

There is no significant difference here.[107]

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[107] There is not a significant difference when teachers rating the importance of Attitudes and Values is compared by teachers on their first visit and teachers not on their first visit ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 1516)= 3.095, p 0.377 (>0.05).

Fig 5.1s: Form A, Q.19: Skills by Q.20: 'Is this your first visit (as a teacher) to a museum with this class?', 2005

	Yes	No
☐ Don't know	0%	0%
■ Not at all important	0%	0%
☐ Not very important	1%	1%
☐ Neither	5%	5%
☐ Important	46%	45%
■ Very important	47%	49%
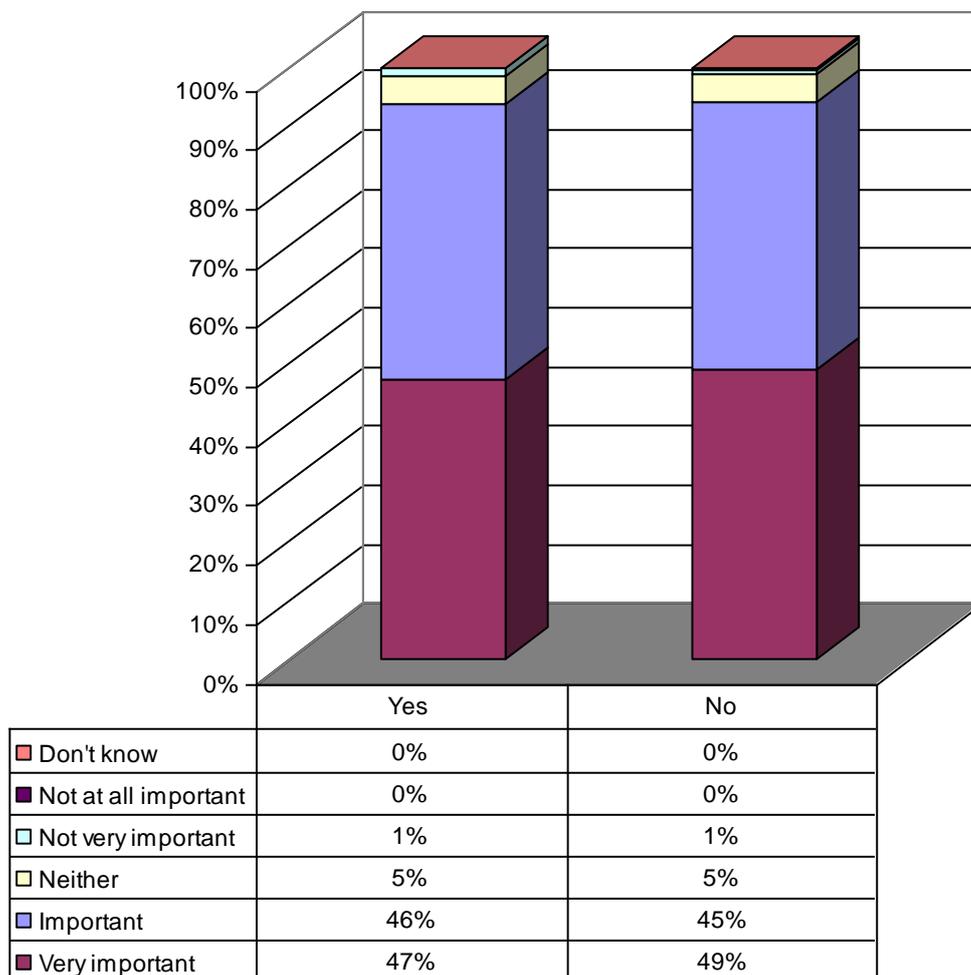
Base: all teachers' responses Q.19: Skills and Q.20:'Is this your first visit (as a teacher) to a museum with this class?', missing excluded, 2005, (683 yes, 837 no)

These very small differences are not significant.[108]

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[108] There is not a significant difference when teachers rating the importance of Skills is compared by teachers on their first visit and teachers not on their first visit ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 1515)= 0.811, p 0.847 (>0.05).

Fig 5.1t: Form A, 2005. Q.19: Action, Behaviour, Progression by Q.20: 'Is this your first visit (as a teacher) to a museum with this class?', 2005

|	Yes	No
■ Don't know	1%	1%
■ Not at all important	0%	0%
□ Not very important	1%	1%
□ Neither	4%	3%
■ Important	41%	37%
■ Very important	54%	58%
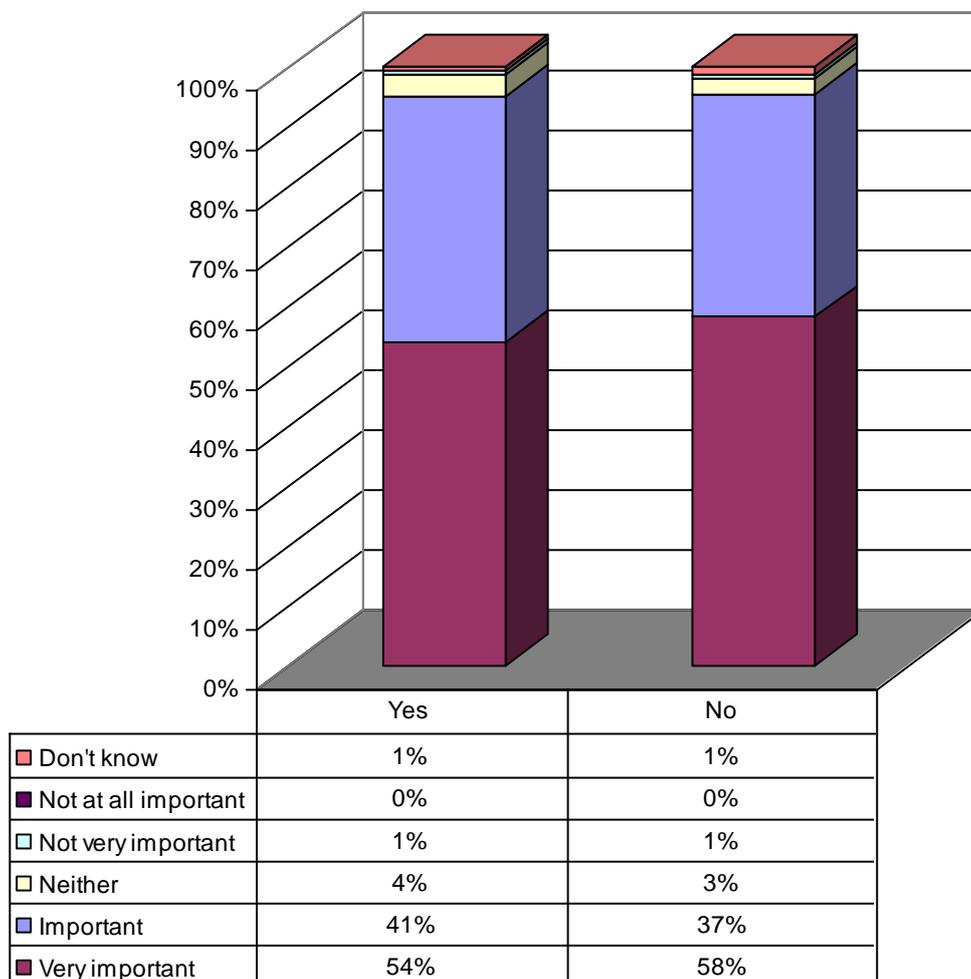
Base: all teachers' responses Q.19: Action, Behaviour, Progression and Q.20:'Is this your first visit (as a teacher) to a museum with this class?', missing excluded, 2005, (yes 624, no 751)

There is a small difference between teachers here, with those who have been before more convinced that pupils will benefit from what they do at the museum. However, these differences are too minor to be regarded as statistically significant.[109]

Forty-three percent of teachers were on their first visit to the museum, compared with 45% in 2003. While it is interesting to see that teachers do increase the level of importance accorded to the GLOs once they have used a museum, it is not the teachers on their first visit that are responsible for the apparent drop in importance of the GLOs in 2005.

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[109] There is not a significant difference when teachers rating the importance of Action, Behaviour, Progression is compared by teachers' on their first visit and teachers not on their first visit ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 1363)= 3.683, p 0.298 (>0.05).

♦ Q.19: cross-tabbed by the link of the work at the museum to the
curriculum (Q.22)

Fig 5.1u: Form A, Q.19: Enjoyment, Inspiration, Creativity and Q.22: 'Is today's work linked to the curriculum?', 2005

	Yes	No
☐ Don't know	0%	2%
■ Not at all important	0%	0%
☐ Not very important	0%	0%
☐ Neither	1%	1%
☐ Important	18%	23%
■ Very important	80%	75%
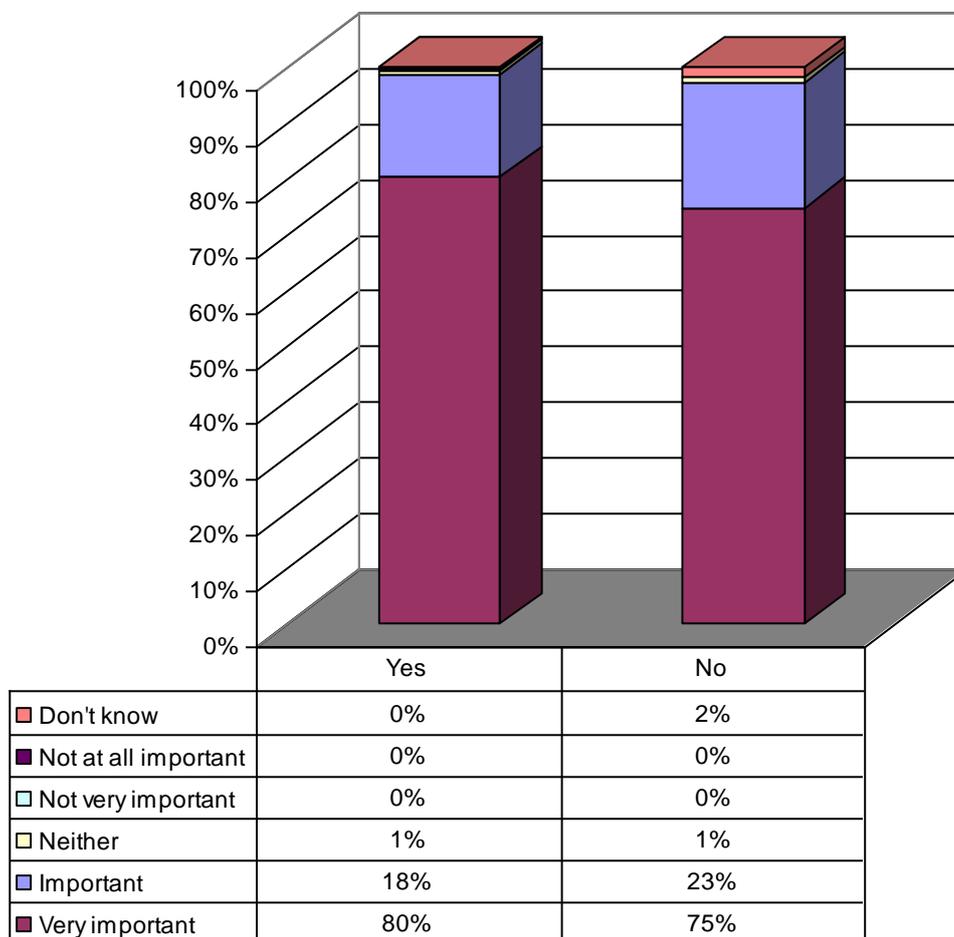
Base: all teachers' responses Q.19: Enjoyment, Inspiration, Creativity and Q.22: 'Is today's work linked to the curriculum?', 2005, missing excluded (yes 1410, no 115)

While the vast majority of teachers who are using the museum for both curriculum-related and non curriculum-related work think Enjoyment, Inspiration, Creativity is 'very important', those working on the curriculum rate this more highly. However, this difference in rating of 'very important' is too small to be statistically significant.[110]

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[110] There is not a significant difference when teachers rating the importance of Enjoyment, Inspiration, Creativity is compared by teachers' working on the curriculum and teachers not working on the curriculum ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 1521)= 1.732, p 0.63 (>0.05).

Fig 5.1v: Form A, Q.19: Knowledge and Understanding and Q.22: 'Is today's work linked to the curriculum?', 2005

	Yes	No
🟥 Don't know	0%	1%
⬛ Not at all important	0%	0%
⬜ Not very important	0%	0%
⬜ Neither	1%	2%
🟦 Important	26%	52%
🟥 Very important	73%	45%
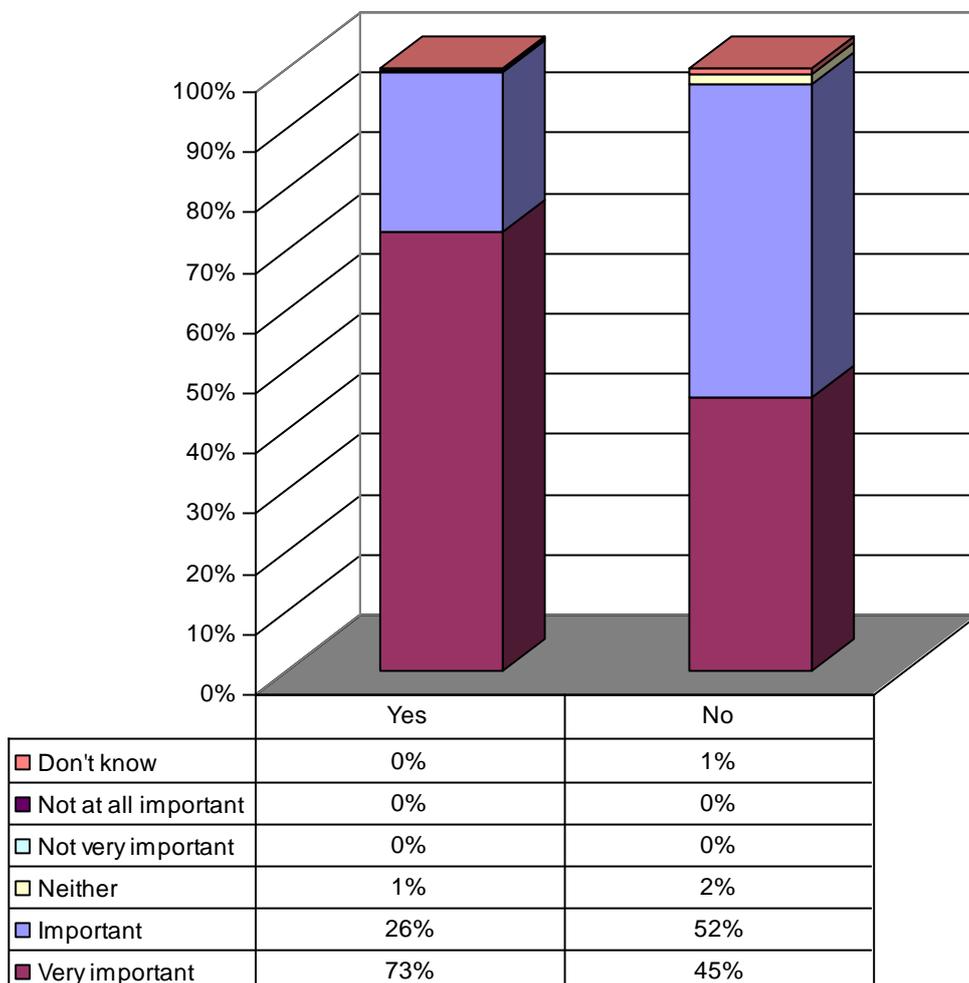
Base: all teachers responses Q.19: Knowledge and Understanding and Q.22: 'Is today's work linked to the curriculum?', 2005, missing excluded (yes 1422, no 115)

There is a huge difference between those teachers whose work is curriculum-linked and those whose work is not curriculum-linked in relation to the importance accorded to Knowledge and Understanding. [111]

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[111] Chi square analysis was not performed on this cross-tab because of the very low number of responses in the 'not important' and 'neither' categories.

Fig 5.1w: Form A, Q.19: Attitudes and Values and Q.22: 'Is today's work linked to the curriculum?', 2005
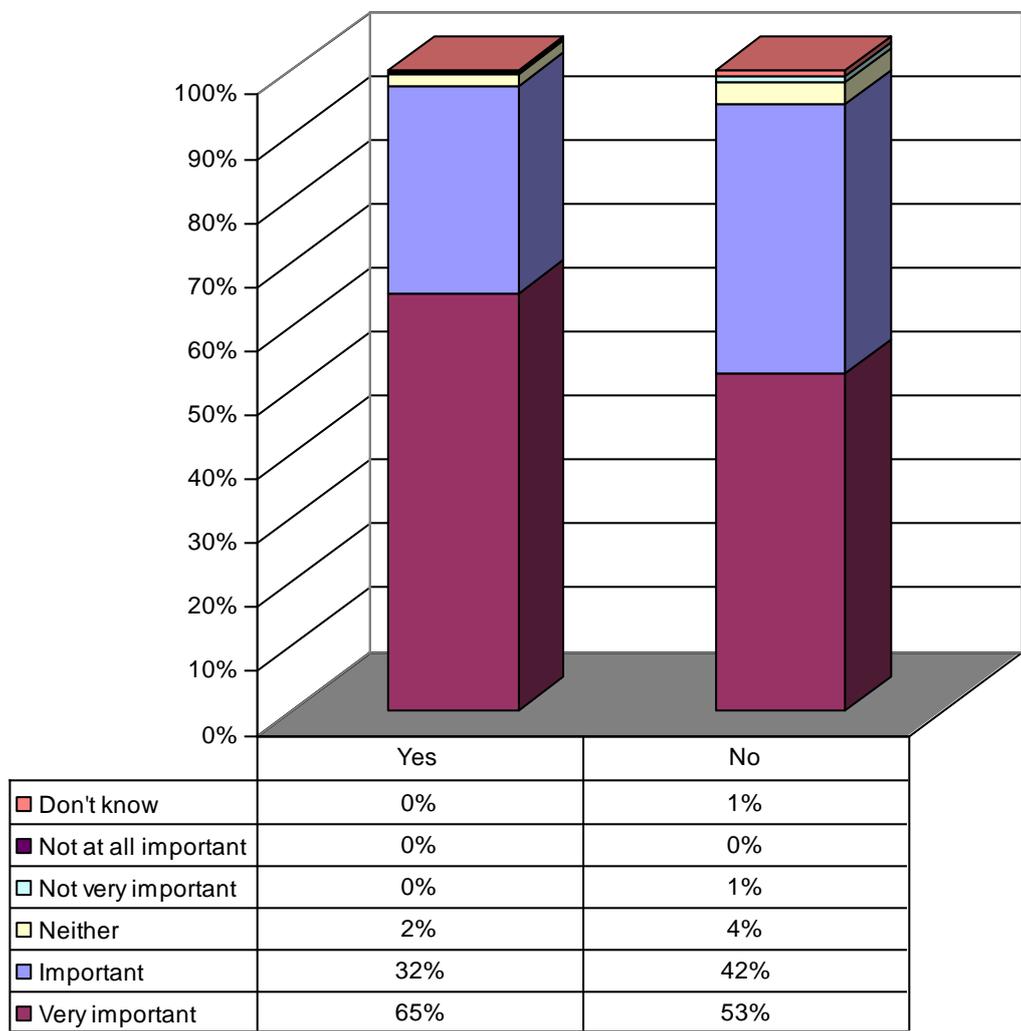
	Yes	No
■ Don't know	0%	1%
■ Not at all important	0%	0%
□ Not very important	0%	1%
□ Neither	2%	4%
■ Important	32%	42%
■ Very important	65%	53%

Base: all teachers' responses Q.19 Attitudes and Values and Q.22: 'Is today's work linked to the curriculum?', 2005, missing excluded (1408 yes, 112 no)

There is a substantial difference in the importance accorded to Attitudes and Values between those teachers linked to the curriculum and those who are not. [112]

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[112] Chi square analysis was not performed on this cross-tab because of the very low number of responses in the 'not important' and 'neither' categories.

Fig 5.1x: Form A, Q.19: Action, Behaviour, Progression and Q.22: 'Is today's work linked to the curriculum?', 2005

	Yes	No
☐ Don't know	1%	2%
■ Not at all important	0%	0%
☐ Not very important	1%	1%
☐ Neither	3%	7%
■ Important	39%	45%
■ Very important	57%	45%
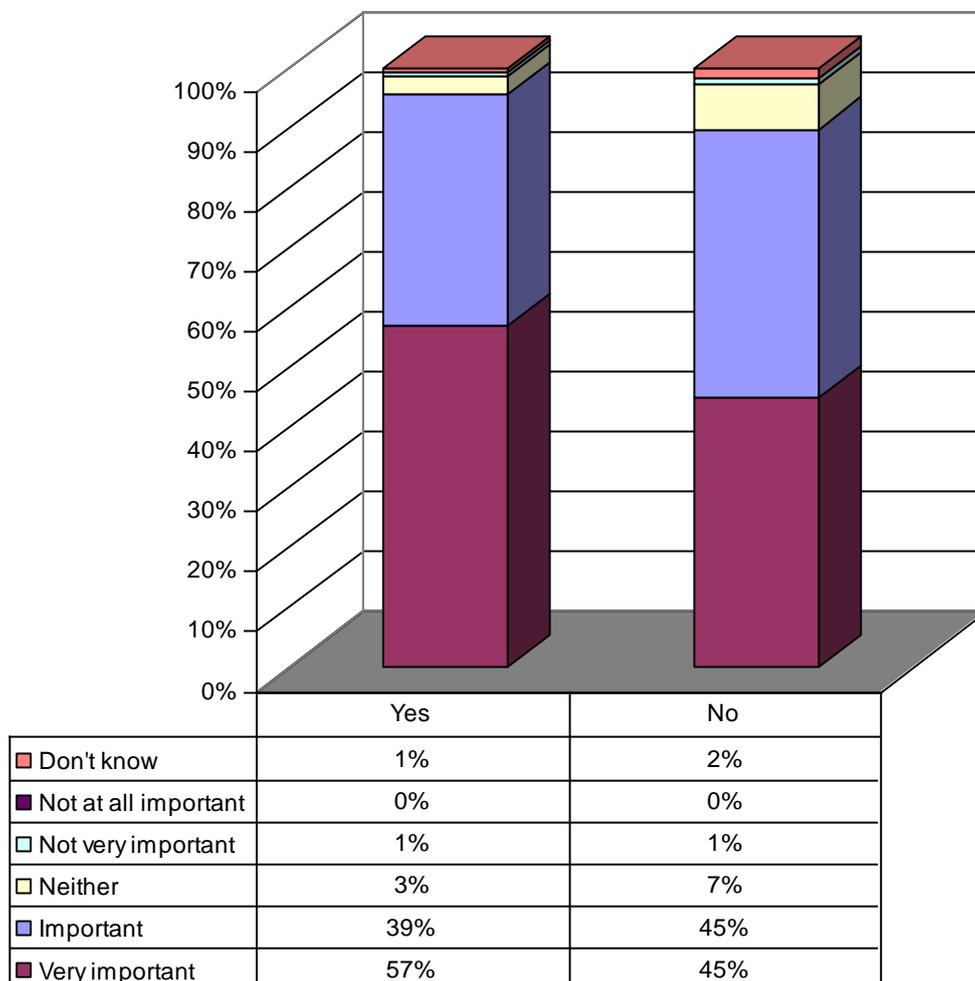
Base: all teachers' responses Q.19: Action, Behaviour, Progression and Q.22: 'Is today's work linked to the curriculum?', 2005, missing excluded (yes 1267, no 107)

Here again there is a considerable difference between the teachers according to their focus. [113]

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[113] Chi square analysis was not performed on this cross-tab because of the very low number of responses in the 'not important' category.

Fig 5.1y: Form A, Q.19: Skills and Q.22: 'Is today's work linked to the curriculum?', 2005

|	Yes	No
☐ Don't know	0%	1%
☐ Not at all important	0%	0%
☐ Not very important	1%	3%
☐ Neither	4%	6%
☐ Important	45%	58%
☐ Very important	50%	32%
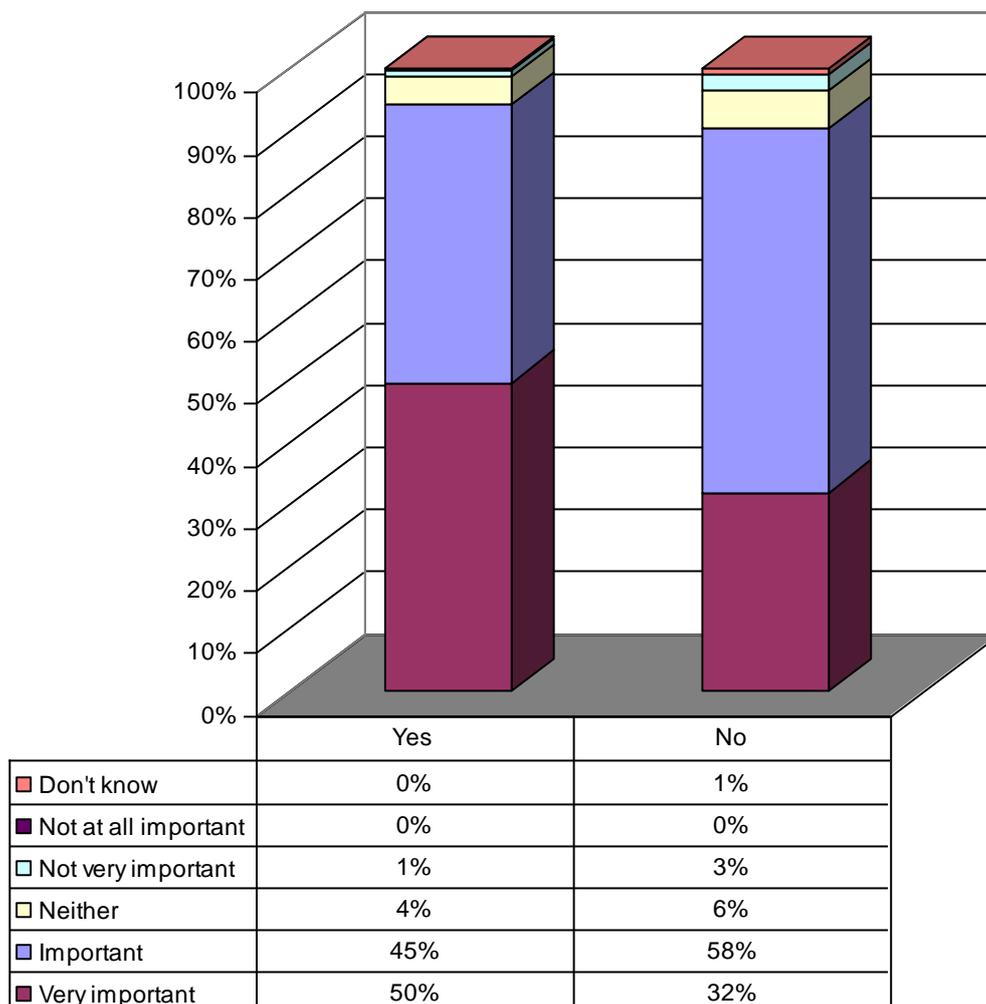
Base: all teachers' responses Q.19: Skills and Q.22 'Is today's work linked to the curriculum?', 2005, missing excluded (yes 1405, no 113)

The teachers show a significant difference in the importance they attach to this GLO according to the relationship of their work to the curriculum.[114] With teachers working on the curriculum more likely to rate Skills 'very important' rather than 'important', when compared with those not working on curriculum-related activities.

The percentage of teachers using museums for curriculum-related work has decreased from 94% in 2003 to 90% in 2005. In the charts above, there are some very large percentage differences between teachers in their view of the importance of each of the GLOs according to whether or not their work was curriculum-related. These are shown below.

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[114] There is a significant difference when teachers rating the importance of Skills is compared by teachers working on the curriculum and teachers not working on the curriculum ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 1514)= 14.057, p 0.003 (<0.05).

Table 5.1z: Form A, Q.19: Percentage of teachers rating each GLO 'very important', 2005

	Curriculum-related	Not curriculum-related	Percentage difference
Enjoyment, Inspiration, Creativity	80%	75%	5%
Knowledge and Understanding	73%	45%	28%
Attitudes and Values	65%	53%	12%
Skills	50%	32%	18%
Action, Behaviour, Progression	57%	45%	12%

Base: teachers responding 'very important' Q.19 and Q.22, 2005 (EIC 1525, KU 1537, AV 1520, S 1518 and ABP 1374)

It is likely that the drop in teachers using the museum for curriculum-related work has affected the level of importance accorded to each GLO.

5.2 The importance of museums in teaching

♦   Q.26: 'How important are museums to your teaching?'

The extremely high levels of appreciation of museums and their contribution to learning are linked to how important teachers think museums are to their teaching. The chart below shows that broadly equal numbers of teachers think that museums are 'very important' (46%) or 'important' (49%) for their teaching.

Fig 5.2a: Form A, Q.26: 'How important are museums to your teaching?', 2005
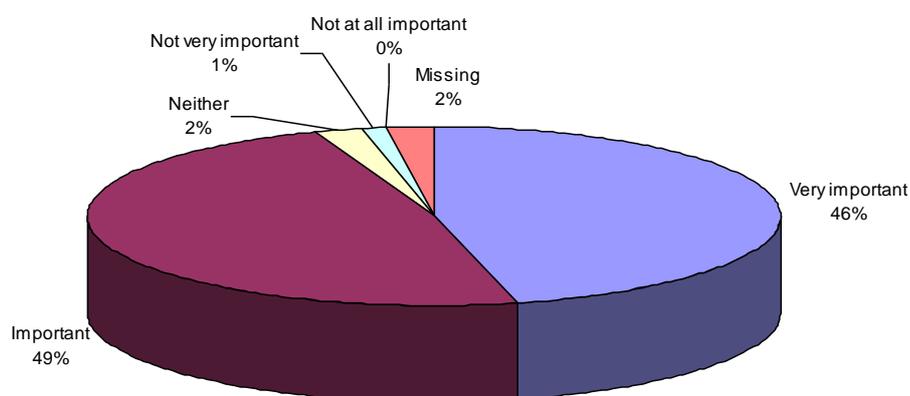
Base: all teachers' responses Q.26: 'How important are museums to your teaching?', 2005 (1632)

The total percentage of teachers feeling positive about museums and finding them either 'very important' or 'important' for teaching is 95%. Perhaps this is not very surprising, as this is a survey of those teachers who were indeed using museums for teaching. The results are virtually identical in both the Phase 1 and the Phase 2 museums.

Compared with the first study, there has been a significant change in how teachers' rate the importance of museums to their teaching.[115] While the overall positive value is much the same (95% in 2005, 95% in 2003), the balance has shifted considerably, so that fewer teachers in 2005 stated that museums were 'very important' (46% compared with 58%) than in 2003, and more stated 'important' (48% compared with 37%).

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[115] There is a significant difference in teachers rating the importance of museums to their teaching between 2003 and 2005 ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 2515)= 36.735, p <0.001.

Table 5.2b: Form A: Percentages of teachers stating that museums were 'very important' and 'important' to their teaching, 2003 and 2005

	2003	**2005**
Very important	58%	46%
Important	37%	48%

Base: all teachers' responses Q.22: 'How important are museums to your teaching?' 2003 (936) and Q.26: 'How important are museums to your teaching?' 2005 (1632)

Given the range of views expressed by different teachers discussed in relation to the way they valued the GLOs, their attitudes to the importance of museums was reviewed in relation to whether they were teachers of primary or secondary pupils, and whether or not their work at the museum was linked to the curriculum. Figures 5.2c and 5.2d below show the results.

Fig 5.2c: Form A, Q.26: 'How important are museums to your teaching?', by Key Stage, 2005

	KS2 and below	KS3 and above
■ Not at all important	0%	0%
□ Important	1%	4%
□ Neither	2%	4%
■ Important	50%	45%
■ Very important	47%	47%
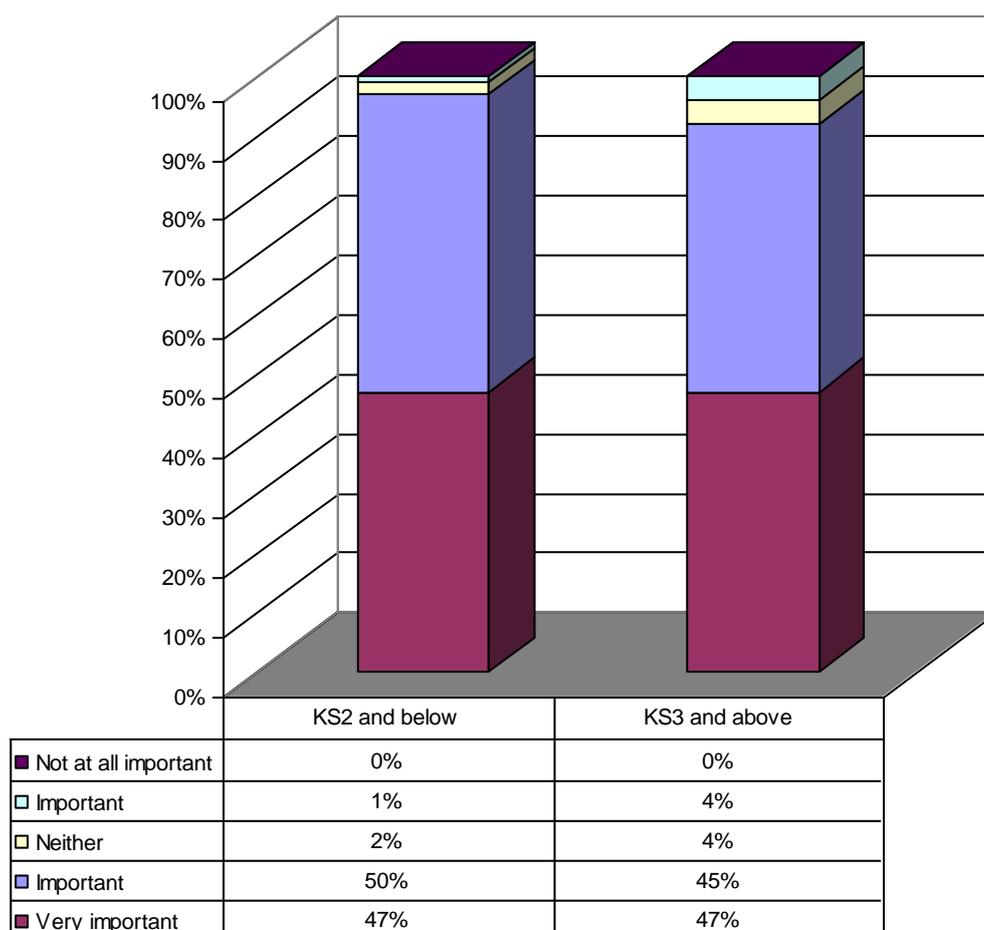
Base: all teachers' responses Q.26: 'How important are museums to your teaching?' and Q.10 Key Stage groups, missing and mixed Key Stage groups excluded, 2005 (KS2 and below 1366, KS3 and above 201)

Fig 5.2d: Form A, Q.26: 'How important to teaching' by Q.22: 'Is today's work linked to the curriculum?', 2005[116]

	Yes	No
■ Not at all important	0%	1%
□ Important	1%	5%
□ Neither	2%	5%
■ Important	49%	56%
■ Very important	48%	33%
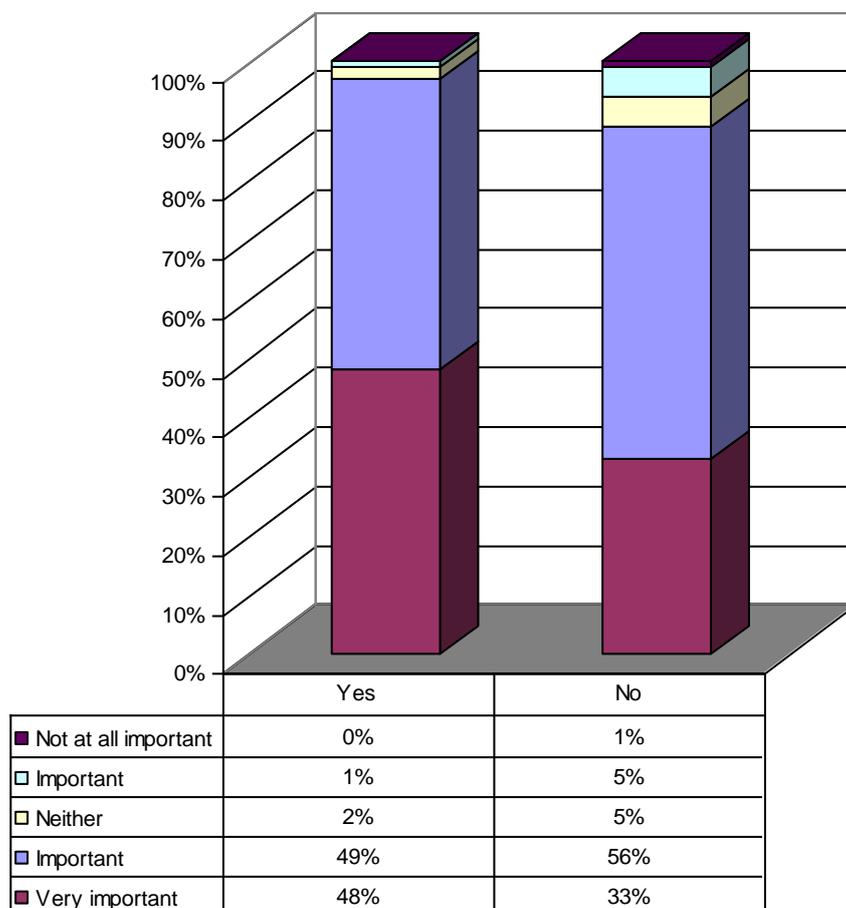
Base: all teachers' responses Q.26: 'How important are museums to your teaching?' and Q.22: 'Is today's work linked to the curriculum?', 2005 (yes 1456, no 120)

While there is very little difference in the responses of teachers working with different Key Stage groups, there is a considerable difference between those whose work is linked to the curriculum and those whose is not. Ninety-seven percent (97%) of teachers who are using the museum for curriculum-related work find museums either 'very important' or 'important.' However, 89% of those who are not using the museum for curriculum-related work also express positive attitudes. But there is a difference of 15% between the 'very important' ratings; 15% more of those teachers using the museum for curriculum-related work rate museums as 'very important' to their teaching than those using the museums for work which is not focused on the curriculum. Ninety percent (90%) of teachers responding to the survey stated that their work was linked to the curriculum. The apparent drop in the ratings of importance of museums to teachers would appear to be because this percentage has dropped from 94% in 2003.

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[116] Chi square analysis was not performed on this cross-tab because of the very low number of responses in the 'not important' and 'neither' categories.

5.2.1 Evidence of the importance of museums from the focus groups and case-studies

The qualitative research provides a further dimension to how teachers value museums. Two elements seem to be key to this - the significance of doing something different to what can be done in schools, and an utterly dependable high quality. As one museum educator put it:

'I think that it isn't just another chapter in a textbook, it's got to be something else... to justify bringing out 200 or 300 students from a very, very tight important stage of their schooling, it's got to be top notch quality and we've got to add something that they cannot do at school'.

5.2.2 Importance of the local

Many teachers talked in an interesting way about how a local museum can provide pupils with information about their local context. Teachers thought this was important for a number of reasons. A museum visit provided pupils with exposure to parts of their local area which they may not have visited before:

'The majority of children have never been to a museum, few even come into the city centre'.

'They go to their local shopping centre but not into the city'.

'Some children haven't even been to Woolworth's'.

Teachers also mentioned that local museums can provide pupils with an understanding of the way in which their local environment had changed over time:

'We go to the Police Museum as part of our topic looking at how the locality has changed'.

'We're aware the city's changing ... [we did] a four day workshop..., looking at parts of the city other than the shopping areas where they all go, the girls were amazed and had no idea. And ... we had a Kurdish girl who pointed out a tree of remembrance from the atrocities that happened, we showed them things like the Buddhist Centre and the Chinese Art Gallery there in the art quarter, some other shops, the arts and craft shop'.

'They looked at ... work, he photographed the city from high vantage points, making it look very glamorous and clean. And then they looked from when they were walking round. There's the down-and-outs and the graffiti and they thought about how the city presented itself and how they felt about it and what they would want for the future for their culture and generation'.

Most of the teachers we spoke to commented on the value of the museum for presenting a local perspective on subjects taught within the National Curriculum, and how powerful it was to use local examples like Blakesley Hall which helped pupils to understand the Tudors in the context of their local area.

'The curriculum is national and decided by the Government, and textbooks seldom give local examples. Museums can give a more local perspective'.

'[It gives access to] objects … related to the local context. Real connections exist and this triggers an emotional response'.

Loren aged 15 was also able to think differently about her local area after a visit to the Museum of London:

Fig 5.2.2a: Form B KS3 and above completed by 15 year old pupil after a visit to the Museum of London

The most interesting thing about today was...

getting to know about the regeneration and of the history of the dockland where i live. I also like the fact that you get a break and while your out discover thing i didnt noo. and know how the people that lived in docklands feel makes me realise what life used to be like. I also liked the information given.

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149

It is not only attitudes to urban contexts that can change. Will aged 13 became more aware of and sympathetic to his environment after a visit to Roots of Norfolk at Gressenhall:

Fig 5.2.2b: Form B KS3 and above completed by 13 year old pupil after a visit to Roots of Norfolk at Gressenhall

The most interesting thing about today was...

Seeing the country side and realising how easy it would be to loose it. Also how many rare animals Norfolk has. and we must preserve what we have and not loose something that is precious and fragie to mankind.

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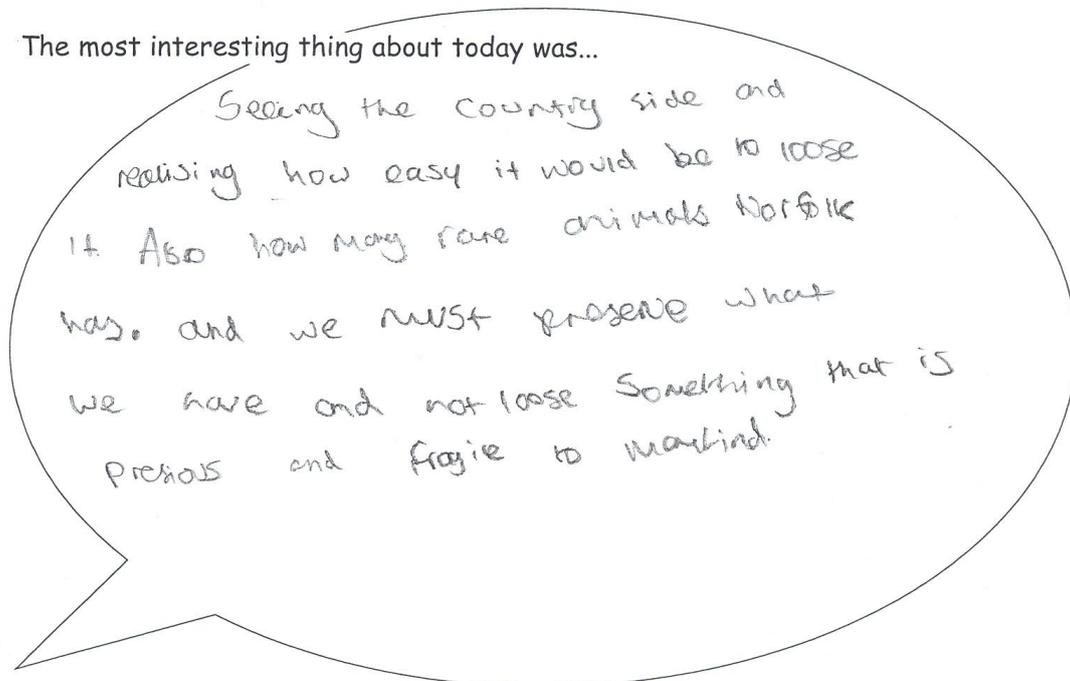
5.3 Teachers' confidence in using museums

♦ Q.28: 'To what extent has the experience of this visit increased your own confidence to use museums as part of your teaching?'

The importance of museums in teaching is strongly related to how confident teachers feel about using museums. The Teachers' Questionnaire (Form A) suggests that 90% of teachers thought it 'likely' or 'very likely' that the visit they had just completed would have increased their confidence to use museums as part of their teaching. Sixty percent (60%) of teachers thought this was 'very likely'. The percentage of teachers saying 'very likely' was slightly higher in the Phase 1 museums at 63% than in the Phase 2 museums (58%), however this difference cannot be considered statistically significant.[117] This 5% difference might be attributable to greater maturity and development in the Phase 1 museums because of Renaissance funding; this increased level of development may lead teachers to feel more confident.

Table 5.3a: Comparing levels of confidence between Phase 1 and Phase 2 museums, 2005

	All museums	Phase 1	Phase 2
Very likely	60%	63%	58%

Base: all teachers' responses Q.28: 'To what extent has the experience of this visit increased your own confidence to use museums as part of your teaching?', 'very likely' only 2005 (1632)

Teachers' confidence in using museums as part of their teaching shows no significant[118] change between 2003 and 2005, although slightly more teachers thought it 'very likely' or 'quite likely' in 2005 (90% in 2005, 89% in 2003) that their visit had increased their confidence in using museums as part of their teaching.

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[117] There is not a significant difference in teachers' confidence to use museums as part of their teaching between Phase 1 and Phase 2 museums in 2005 ('missing' and 'don't know' categories excluded).
Chi square (degrees of freedom 3, n= 1582)= 3.39, p >0.05.
[118] There is not a significant difference in teachers' confidence to use museums as part of their teaching between 2003 and 2005 ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 2494)= 4.46, p >0.05.

Fig 5.3b: Form A, Q.28: 'To what extent has the experience of this visit increased your own confidence to use museums as part of your teaching?', 2005
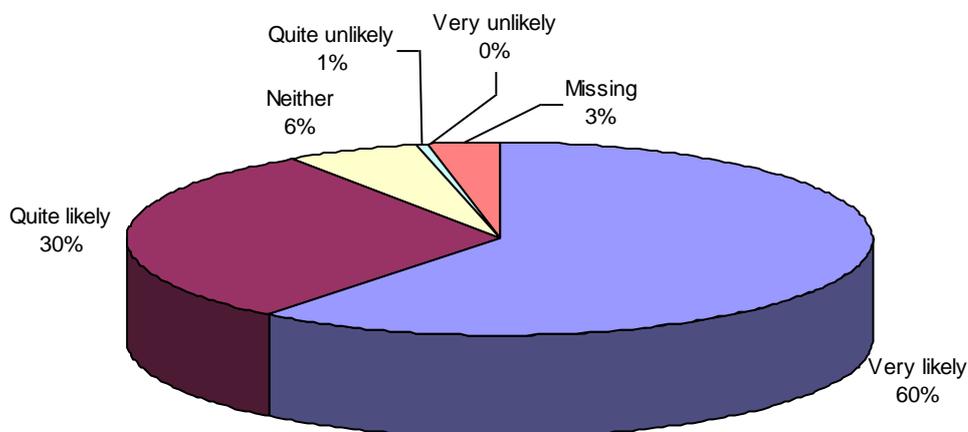
Base: all teachers' responses to Q.28: 'To what extent has the experience of this visit increased your own confidence to use museums as part of your teaching?', 2005 (1632)

Fig 5.3c: Form A, Q.24: 'To what extent has the experience of this visit increased your own confidence to use museums as part of your teaching?', 2003
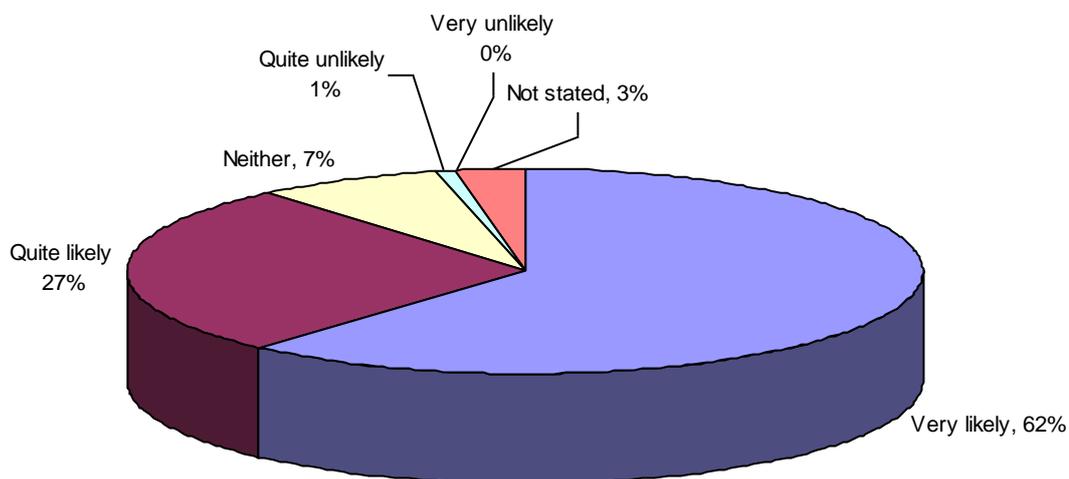
Base: all teachers' responses to Q.24: 'To what extent has the experience of this visit increased your own confidence to use museums as part of your teaching?', 2003 (936)

## 5.4 Value of the museum to teachers' professional development

A number of teachers mentioned the importance of engagement with a museum to their own professional development. Some mentioned developing their own subject-specific knowledge and learning as a result of museum provision, such as a mediated session.

Fig 5.4a: A teacher becomes a participant in a museum workshop

Other teachers mentioned that it was useful for them to see how other people managed, worked and interacted with their classes, and discussed how being exposed to different teaching styles was important. One teacher talked about how an involvement with a museum had re-introduced her to some skills:

'For me it's reminded me at a very basic level that just simple things like tearing bits out of magazines and sticking them on and sticking photographs on and just cutting and sticking and going back to the basics can teach them a lot, doesn't cost a lot and it's something we can do very easily and adapt. I'd forgotten, you know, I'd just forgotten how easy it is really to think of six different activities that don't cost much and the children love it and they're learning a lot'.

5.5 Levels of satisfaction with the museum provision

♦   Q.27: 'How satisfied are you with the museum's provision today?'

Seventy-four percent (74%) of teachers in all 54 museums responded that they were 'very satisfied' and a further 22% were 'satisfied'. Together, this is 96% of teachers stating that they were either 'satisfied' or 'very satisfied'. This compares well with the first study, where 72% were 'very satisfied' and 24% were 'satisfied', with the same overall positive rating of 96%.

Fig 5.5a: Form A, Q.27: 'How satisfied are you with the museum's provision today?', 2005
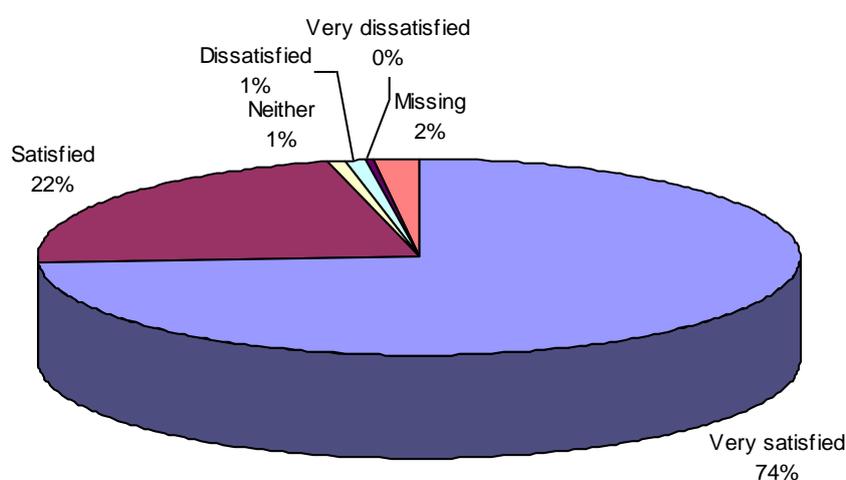
Base: all teachers' responses to Q.27: 'How satisfied are you with the museum's provision today?', 2005 (1632*)*

Looking at the breakdown by Phase, 78% of teachers in the Phase 1 museums stated that they were 'very satisfied', compared with the Phase 2 museums, where 74% of teachers were 'very satisfied'.

These small percentage differences, whilst not statistically significant,[119] may suggest that the museum education services that have received Renaissance funding for the longest period of time are producing a greater percentage of teachers who are 'very satisfied'.

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[119] There is not a significant difference in teachers' satisfaction with museum provision between Phase 1 and Phase 2 museums in 2005 ('missing' and 'don't know' categories excluded). Chi square (degrees of freedom 3, n= 1596)= 4.515, p= 0.21 (p >0.05).

Fig 5.5b: Form A, Q.27: 'How satisfied are you with the museum's provision today?' by museum Phase, 2005
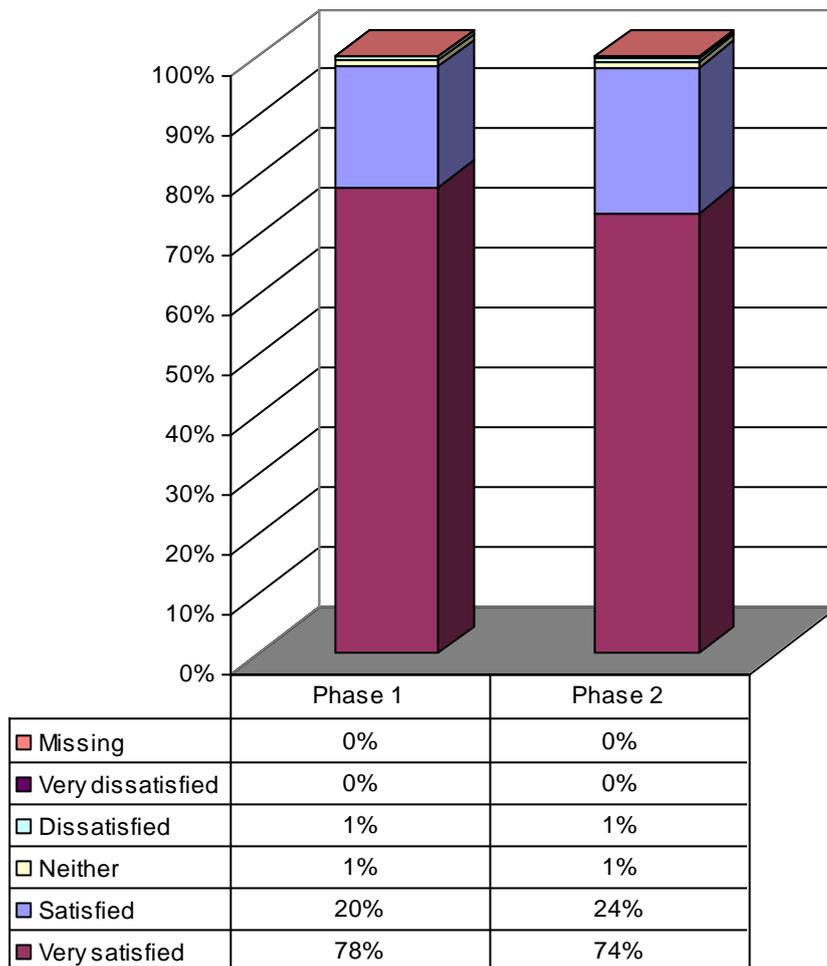
	Phase 1	Phase 2
□ Missing	0%	0%
■ Very dissatisfied	0%	0%
□ Dissatisfied	1%	1%
□ Neither	1%	1%
□ Satisfied	20%	24%
■ Very satisfied	78%	74%

Base: all teachers' responses to Q.27 'How satisfied are you with the museum's provision today?' by museum Phase (Phase 1 museums 761, Phase 2 museums 835)

5.6 Evidence from the focus groups and case-studies of satisfaction and dissatisfaction with museum provision

During discussions, teachers were probed to identify the problems teachers experienced using museums and the aspects of museum provision which they found most useful. Many of these issues are very similar to those that were raised during the earlier study in 2003. Research with teachers, pupils, LEAs and other service providers undertaken by all nine of the regional Hubs and MLA's Regional Agencies confirms the key areas in which the teachers we spoke to expressed dissatisfaction.[120]

MLA's research identified two main sets of barriers to the development of the national museum education offer. These were:

1. 'Barriers to school participating in a national museum education offer:
    * schools not recognising the relevance of museums education
    * logistical issues
    * skills in schools
    * awareness in schools of what museums offer

2. Barriers to museums developing a national education offer:
    * capacity in museums
    * skills in museums
    * environment and facilities
    * education activities which are not relevant to schools or learners'.[121]

Relevance:
As many of the teachers we spoke to were already engaged in museum education and were making good use of the museum as an educational tool we did not interview any teachers who questioned the relevance of the museum to pupils. MLA's research identified that themes focusing on the cultural, social and educational relevance of the museum ran through all the of the Hub's Education Programme Delivery Plans (EPDP).[122] However, MLA also found that 'without the relevance of this "offer" being acknowledged conceptually by LEAs and schools in the first instance, a greater awareness of what museums can bring to learning will not be achieved'.[123] We found that it was precisely the broader cultural, social and educational relevance of the museum that teachers identified with. However, the teachers who identified this broader relevance of the museum were more likely to be experienced museum users. Teachers who were less experienced museum users were likely to comment on the utility of the museum in direct proportion to its relevance to the curriculum. This seemed a matter of the teachers' confidence in using the museum and in teaching the subject. Where teachers were more confident of their subject area and museum use they were able to talk confidently about using the museum, providing educational tools and

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[120] MLA, 2005, *Unlocking the Magic: Museum services for schoolchildren, an overview of regional research undertaken for Renaissance in the Regions*, unpublished.
[121] MLA, 2005, 17.
[122] MLA, 2005, 18.
[123] MLA, 2005, 18.

designing their own museum visit. In addition, we identified that in some cases this was a lack of understanding and in some cases awareness of what museums offer.

Training:
We identified training issues for teachers in relation to the utility of the museum as an educational tool especially in relation to confidence, lack of awareness and the range of opportunities for museum use. Teachers were also in agreement about the importance of the quality of the facilitation provided by the museum. This finding is in accordance with MLA's research which found that the 'value of a museum visit was seen by teachers as depending on the quality of delivery by museum facilitators'.[124]

Logistics, environment and facilities:
Below are listed items of dissatisfaction which teachers we spoke to identified as a barrier to their use of museums. In common with MLA's research we found that many of the barriers to utilising museums identified by teachers were logistical or had to do with the museum environment and its facilities. Our research supports MLA's conclusion that this 'suggests that practical developments around information-sharing and promotion (e.g. support on risk assessment; on-line and print directories of provision) could provide relatively straightforward improvements to links between museums and schools'.[125]

Following is a list of items of dissatisfaction and satisfaction taken from interviews and focus groups with teachers as part of the qualitative research.

Dissatisfaction with museum provision:
Problems with museums:

- Pupil to staff ratio established by museums is too high and unrealistic.
- Lack of appropriate food/ food too expensive.
- Disengaged or unenthusiastic museum staff.
- Museum staff that are rude to pupils.
- Museums not able to cater for very large groups (e.g. whole year groups -230 pupils).
- Disorganised museum administration e.g. bookings of lunch rooms not being honoured, pre-arranged programmes being changed without informing the school.
- Limited view of the value of museum learning; museums advertise content or subject specific programmes but they could also advertise the diverse learning experiences provided by a museum visit regardless of the subject.
- Timing of 'pre-visit' sessions for teachers; these sessions must take better account of the teacher's working day, e.g. some teachers cannot attend 3.30pm sessions as some schools finish at that time. A number of teachers commented on the disappearance of 'pre-visit twilight sessions' which they had found useful.
- Issues with space for classes to have lunch.

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[124] MLA, 2005, 20.
[125] MLA, 2005, 18.

Problems with factors beyond museums' control:

- High cost of transport to get to the museum (a number of teachers suggested museums should help with this cost), asking parents for money is not encouraged, and many teachers talked about only asking for a voluntary contribution from parents.
- Difficulty of taking classes of children on public transport e.g. public 'less than courteous'.
- Museum visits cut into other lessons - pupils miss classes in other curriculum subjects.
- Requirement of a high pupil to staff ratio.
- School institutional requirement to justify visit in terms of particular institutionally set targets; some teachers find this difficult, and possibly museums could provide material which teachers could use for these purposes thus providing leverage for permission.
- Large amounts of paperwork and administration associated with a museum visit e.g. letters and phone calls to and from the museum, letters to parents, reply slips, risk assessments, organising free school meals, organising transport, and so forth.
- Risk assessments - one teacher stated that the risk assessment forms she had to complete for a museum visit were 10 pages long; another teacher described a museum which helps with risk assessments (see below in section on satisfaction).
- Some teachers who had a limited or a narrow understanding of how the museum was useful to their teaching complained about unstructured museum experiences where either the mediated session was not highly structured or the material provided for self-led sessions did not provide a highly structured experience. Teachers who were more confident and flexible in their use of the museum talked about enjoying unstructured visits as well as structured visits.
- One teacher talked about encountering racism from a member of the public on a museum visit.
- Some teachers are worried pupils will misbehave and this would be highly visible in public places.
- One secondary school teacher talked about the impact of the new Teaching and Learning Responsibilities (TLR). This new government directive had been interpreted by his school in such a way that it will create more barriers to taking groups out to museums as cover for other classes will problematic. As part of the TLR high school teachers are not allowed to cover colleagues for illness or school trips. Teachers are given 3-4 free periods a week for marking and preparation but they are not allowed to do anything else in this time. In the past, this time could be used to cover colleagues (who may have been on a school trip) but this is no longer allowed. This means that there must be a significant investment in training teaching assistants who are qualified enough to provide cover. There had been some suggestion that the cost of providing cover for a school trip could be passed on to pupils.

Satisfaction:
Aspects of museum provision that teachers find useful:

- Museum staff who are networked with teachers and are proactive about inviting teachers to the museum to build partnerships.
- Museums which ask for schools to state what subjects are covered and help to plan a tailored visit to the museum.
- Good quality museum guides or packs for teachers.
- Good quality museum packs targeted at a curriculum subject.
- Museum packs and guides which include materials for the pupils and give them lots of things to do/ questions to answer.
- Some teachers talked about appreciating most those museums which provide highly structured visits either through packs which teachers can use for a self-led session or through facilitation; other teachers used unstructured visits and many of these talked about the importance of pre-visit sessions for teachers.
- Pre-visit sessions for teachers.
- Good quality mediated sessions.
- Museums that are flexible in the options and material they can provide for teachers.
- Actors in role as facilitators of a museum visit.
- Good quality websites which can be used to add to the pre-visit information (not as a replacement for) and provide information the teachers can use to prepare the pupils for their visit.
- A number of teachers talked about the importance of artefacts which pupils could touch or see museum staff handle.
- Children involved in role playing or dressing up.
- Workshops.
- Media resources produced by museums which can be used as an aid to teaching e.g. CD ROMs, websites.
- Two of the special school teachers commented that museums which enabled the pupil to have some kind of physical involvement were particularly useful.
- Enthusiastic and knowledgeable museum staff.
- Museums which send a completed risk assessment form to the teacher prior to the visit.
- Museum programmes involving a process with an outcome (assignment, painting, piece of writing etc.) - although sometimes the process is more important than the outcome.
- Regular sessions/ programmes.
- Working with specialists- artists/ scientists etc.

5.7 Conclusion

This section considers how teachers value museums. Overall, the great enthusiasm for museums is very clear, and it is also clear that many teachers can discuss their use of museums critically and analytically. Indeed, teachers in the research undertaken for this study in 2005 appeared more reflective about the types of learning their pupils experienced during a museum visit, and were able to analyse and examine this more effectively than during the 2003 study, where teachers frequently merely described the activities that took place during the museum visit. Teachers were also more focused on the impact of the museum on their pupils in relation to issues around ethnicity, socio-economic deprivation, cultural entitlement, aspiration, class mobility and inclusion. It may be that the policies and strategies outlined in Section 1, and especially *Every Child Matters*, may have influenced teachers' concerns and attitudes.

Much of this section considered issues to do with the value to teaching and learning that teachers place on museums and the learning that may result. It has begun to become clear that teachers value museum-based learning outcomes differently according to the reasons for which they are using museums. It seems logical that purpose and outcome should be strongly related.

Overall, teachers are extremely positive about the value of museums to their teaching. The percentages of teachers saying that the learning outcomes that could result from using museums were 'important' or 'very important' to them are very much the same (with one exception) as in 2003 (2003 figures in brackets):

- Increase or change in Knowledge and Understanding   95% (96%)
- Enjoyment, Inspiration, Creativity   94% (96%)
- Change or development in Attitudes and Values   92% (93%)
- Increase in Skills   89% (88%)
- Action, Behaviour, Progression   81% (92%)

Looking only at the 'very important' and 'important' values appeared to raise questions about whether there had in fact been a change in the ways teachers valued museums and this has been further reviewed. Analysing the difference between teachers' views in 2005 and 2003 as accurately as possible by doing a chi-square test (looking at actual numbers of teachers rather than percentages) after having omitted 'don't know' and 'missing' values, it would appear that teachers find Attitudes and Values slightly more important (by 4%) than in 2003, and Enjoyment, Inspiration, Creativity slightly less important (by 3%).

An analysis of attitudes to the GLOs in relation to teachers' purposes in using museums shows that these differences in purpose have a considerable impact on how teachers value the potential learning outcomes. More of those teachers using museums for curriculum-related work think that the five GLOs are 'very important' than those who are not linking the museum work to

the curriculum, and primary teachers as a whole are much more likely to find the museum-based learning outcomes 'very important' than secondary teachers.

Table 5.7a: Teachers using museums for curriculum-related and non-curriculum-related purposes stating 'very important' (all teachers in all museums), 2005

	Curriculum-related	**Non curriculum-related**
Enjoyment, Inspiration, Creativity	80%	75%
Knowledge and Understanding	73%	45%
Attitudes and Values	65%	53%
Action, Behaviour, Progression	57%	45%
Skills	50%	32%

Base: teachers completing Q.19 and Q.22 (1525 EIC, 1537 KU, 1520 AV, 1518 S and 1374 ABP)

Table 5.7b: Form A, Q.19: Primary and secondary teachers stating 'very important', 2005

	Teachers of KS2 and below	**Teachers of KS3 and above**
Enjoyment, Inspiration, Creativity	81%	68%
Knowledge and Understanding	72%	65%
Attitudes and Values	66%	55%
Action, Behaviour, Progression	58%	49%
Skills	49%	44%

Base: all teachers completing Q.19 (1527 EIC, 1535 KU, 1518 AV, 1372 ABP, 1517 S)

There are some large differences in the importance accorded to museum-based learning outcomes in the tables above. In considering how teachers value museums and the learning that may result from their use, it is vital to differentiate between primary and secondary teachers, and between the purposes for which those teachers are using museums.

Q. 26 asked teachers how important museums were to their teaching. While 95% stated that museums were 'important' or 'very important' for their teaching, which was much the same as in 2003, the percentage stating 'very important' has fallen from 58% to46%. Probing for possible reasons for this, it was found that while Key Stage had no bearing on teachers' views, whether or not the work at the museum was linked to the curriculum was a major factor. As the percentage of teachers using museums for curriculum-related work has dropped since 2003, this may account for an apparent drop in the importance of museums in teachers' eyes.

Very large percentages of teachers (74%) across all museums are 'very satisfied' with their museum experiences (although some important issues were raised about the difficulties teachers face in visiting museums with their classes). Ninety percent (90%) of teachers left the museum feeling 'confident' or 'very confident' about using museums in the future. This is an enormously positive endorsement for museum education staff as a whole, especially considering the very large proportion of schools where children may face challenges in learning.