

SECTION NINE

THE RESEARCH FINDINGS

9.0 Introduction

Renaissance in the Regions is proving to be 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.

This research has explored the impact of Renaissance funding for museum education, looking specifically at the impact on learning. The GLO approach has been used to measure pupils' learning following a museum visit. This study grows out of and extends an earlier study in 2003 that concentrated on 36 museums in the Phase 1 museum Hubs. In 2005, the research has revisited the Phase 1 museums, and also encompassed museums in the Phase 2 Hubs, 69 museums in all.

This has been a very large study, larger than the 2003 study. It has involved larger samples than two years ago and has also included two new sources of evidence, the school case-studies and the information from the museums on the impact of Renaissance funding gathered through Form D. The findings from the research confirm, reinforce and deepen the findings from the earlier study.

Key findings are:

Museums and schools

- The 69 museums are working with disproportionately high levels of schools in areas of deprivation, where there are high percentages of pupils entitled to free school meals
- These museums are working with disproportionately high numbers of special schools
- The numbers of primary and secondary schools using museums closely match the distribution of primary and secondary schools in England
- Numbers of contacts with school-aged children in the 69 museums have increased by 40% (47% Phase 1 museums, 29% Phase 2 museums)

Teachers

- Teachers remain highly enthusiastic about museums, are very satisfied with what they find in museums and very confident about using them in the future
- Teachers are more focused on outcomes than in 2003, and think about learning outcomes differently according to their purposes in using

museums. If their work at the museum is curriculum-focus, learning outcomes are regarded as more important than if it is not

- Teachers at KS2 and below value museum-based learning outcomes more highly than teachers of older pupils
- Teachers have increased their use of museums for cross-curricular work considerably since 2003
- Teachers use museum on-line resources, and borrow objects and handling material in addition to visiting museums
- Primary teachers use museums most, but those secondary teachers using museums do so consistently
- Most, but not all, teachers use museums flexibly and imaginatively, taking advantage of government encouragement to promote creativity
- A very large percentage of all teachers use these 69 museums for historical work. Most of the cross-curricular work is History-based
- 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
- 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

Pupils

- Pupils remain extremely enthusiastic, and confident about their learning even where (in a few cases) their teachers do not think learning has occurred
- Pupils are more enthusiastic where all or most of the critical success factors are in place
- Some pupils can obtain higher levels for their assignments following a museum visit
- Ten percent (10%) more older pupils found museums made school work more inspiring than in 2003
- 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
- Many pupils progress considerably in their understanding after museum visits because of concrete experiences that make facts 'real'
- Most pupils are able to personalise their learning through their individual responses to collective group events; this leads to ownership of the experience and its resulting Knowledge and Understanding, Attitudes and Values. Through this ownership, progression occurs

Phase 1 and Phase 2 museums:

- Taking the Phase 1 and the Phase 2 museums as a whole, there were very few significant differences between them
- Phase 1 museums in this study make up 100% of the three Phase 1 Hub museums
- Phase 2 museums make up 17% of the museums in the six Phase 2 Hubs

- Phase 2 museums were selected because of high levels of educational use

Phase 1 museums

- Secondary schools make up 3% more of the school audience than in the Phase 2 museums
- 69% of teachers visiting the Phase 1 museums are using on-line resources compared to 64% of teachers visiting Phase 2 museums
- There are fewer teachers on first time visits than in the Phase 2 museums (40% compared to 49%)
- Teachers are less likely to be linking their work at the museum to the curriculum
- Teachers are more likely to value Action, Behaviour, Progression

Phase 2 museums

- Older pupils were more enthusiastic about museums
- Higher proportion of teachers on first visit (49% compared to 40%)
- Teachers are more likely to be doing curriculum-related work

The Generic Learning Outcomes approach:

- The GLOs were used to shape this research study and its analysis
- The GLOs proved effective in encompassing, describing and analysing all dimensions of the evidence of learning generated by the research methods
- While each individual GLO can be identified for the purposes of research and analysis, they are closely interwoven in practice
- Teachers are much more attuned to an outcome-based approach to learning than they were in 2003

How museums contribute to government agendas:

- Museums promote creativity and this could be further exploited by schools
- Museums can help in the development of personalised learning
- Museum school services play a powerful role in delivering *Every Child Matters*

These Key Findings are presented in more depth in this Section.

9.1 Scope and background to the research

The research involved 69 museums in the nine regional Hubs; 1,643 teachers who responded to Form A, and a further 31 teachers who were interviewed in focus groups and schools; 26,791 pupils who completed Form B and a further 29 pupils who were interviewed in case studies. This can be compared with 936 teachers and 20,604 pupils in 2003.

The qualitative evidence arising from the school case studies and the focus groups is very closely linked to the quantitative evidence; the schools used in the case studies, as the free school meal and the postcode data demonstrates, are representative of the schools within which the teachers completing Form A might be based.

The research has produced robust evidence with reliable findings. The study has compared this study in 2005 with the study in 2003 (*What did you learn at the museum today, 2003*) and it has also made comparisons within the 2005 study. The 2003 study involved the Phase 1 Hub museums only, while the 2005 study involved museums from all nine Hubs.

The research has taken place at a time of change in schooling. A number of shifts in government educational policy have taken place since the research in 2003, and these seem to be having a bearing on the way teachers think about museums. The National Curriculum, which has been experienced by many teachers for some time as a constraint, is opening up and there is an increased emphasis on creativity and innovation in teaching. There is an increased emphasis on outcome-based teaching and learning.

The sample size for this study is considerably larger than for the 2003 study, but exhibits many of the same characteristics. The school breakdown is much the same, with the largest percentage coming from primary schools; the Phase 1 museums are attracting 3% more secondary schools than the Phase 2 museums. The distribution of types of school (e.g. primary and secondary) in the museum audience closely matches the distribution of all schools in England, with the exception of special schools, which are over-represented at 12% compared to the percentage they form of all schools (5%). However, there is considerable variation in the relative distribution of different types of school across the 9 Hubs.

The Key Stage and gender breakdown of the pupils is very similar to the 2003 study, although there are 4% more Form Bs from older pupils.

9.2 Uplift in numbers using museums

The numbers of school-aged children using museums has increased by 40% from 2003-2005; considered by Hub, in the Phase 2 museums the increase is 29%, which is very similar to the Phase 1 museums who were at the same position in relation to funding when this study was carried out in 2003. The Phase 1 museums, two years on, have increased their contacts with school-aged children by 47%. These are remarkable figures, showing that across the Hubs, museums are making great efforts to increase their use by 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.

It must also be remembered that this increase 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, seems consistent.

9.3 Museums are serving schools in deprived areas

The postcode and free school meal data from this study shows that museums are working with large numbers of schools serving children from socially deprived circumstances, more than would be expected if the schools using museums reflected the normal distribution of schools in relation to deprivation. This confirms the findings from the 2003 study, which, based on postcode data alone, suggested that museums were serving a disproportionate number of schools based in areas of deprivation. A further confirmation of this fact is that two different deprivation indices have been used in 2005, and both show very similar results.

The analysis of postcodes 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 findings can be assumed.

9.4 Teachers' use of museums

The vast bulk of teachers in this study (86%) came from schools that used cultural organisations on a regular basis, although there were larger numbers of primary teachers (91%) than secondary teachers (86%). The overall figure compares with 85% in 2003.

Forty-three percent (43%) of all teachers were on their first visit to the museum where they completed the questionnaire, compared with 44% in 2003, with a higher proportion on their first visit in the Phase 2 museums (49%) compared to the Phase 1 museums (40%), suggesting that the education services in the Phase 2 museums were successfully extending their services because of additional funding. Primary teachers were significantly more likely to be on their first visit (46%) than secondary teachers (36%). Over half of all teachers (58%) had organised the visit themselves, compared to 62% in 2003.

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

Ninety-two percent (92%) 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). As this question was new in 2005, no comparisons could be made with the earlier study.

There were some differences in the response to these questions between the teachers in the Phase 1 and Phase 2 museums, most noticeably for the use of on-line resources, with 69% of teachers visiting the Phase 1 museums using on-line resources compared to 64% of teachers visiting Phase 2 museums.

It is clear that teachers are taking advantage of what museums can offer in a range of ways. We can expect the use of web-based resources to increase considerably and rapidly, as museums increase and improve their web-based materials. The rather low rate of borrowing objects or handling materials may be related to the lack of availability of museum loan services. Historically, many local authority (and some national) museums have provided loan services, which have certainly been much appreciated by teachers, but very many of these historic services were closed down during the 1980s as local authority museum budgets were cut. Any desire to increase the numbers of teachers borrowing museum objects would need to be very carefully reviewed, given the enormous costs of providing handling objects and boxes.

9.5 Using the museum for curriculum-related work

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

When asked if the work at the museum today was linked to the curriculum, 90% of teachers agreed that it was, compared with 94% in 2003, with 3% more teachers working in this way in the Phase 1 museums than in the Phase 2 museums. More primary teachers linked their visit directly to the curriculum, 94% compared to 87% of secondary teachers.

Teachers were asked what curriculum areas they were covering in their visit, and it was clear from their responses that, in contrast to the 2003 study, many teachers (27%) were working in an interdisciplinary manner. The breakdown of subject areas cited by teachers shows a large percentage (51%) working on History-related themes; this compares with 70% in 2003. However, when the interdisciplinary themes are studied closely, it is clear that History as a subject plays a large part in many of them. Eleven percent (11%) of the teachers were working on Art and Design, compared with 15% in 2003, and other subject areas are made up of very tiny percentages.

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. In addition, the drop in teachers using museums for curriculum-related work from 94% to 90% may be a further indication that teachers are beginning to think of museums in a broader way than before.

It became clear during discussions with teachers that schooling and teaching cultures were changing, due at least in part to the impact of new government initiatives. The freeing up of the curriculum, and the emphasis on multi-agency working, potentially offers new opportunities for schools and museums to work in partnership.

9.6 The value of the five Generic Learning Outcomes

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' 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%

Analysing the difference between teachers' views in 2005 and 2003 in some depth, 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%).

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.

The importance of museum-based learning outcomes to teachers was investigated in relation to teachers of different Key Stage groups and also in relation to the link to the curriculum. Primary teachers were much more likely to rate the GLOs highly than secondary teachers. The relationships of the museum work to the curriculum seemed to be an important factor in the ways in which teachers think about the importance of museums, with teachers using museums for curriculum-related purposes much more likely to say that museums were very important to their teaching.

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. Teachers' satisfaction levels, discussed below, suggest that they have found these elements in the museum provision they have experienced.

9.7 The achievement of specific learning outcomes

The consensus amongst the teachers we spoke to as part of the qualitative research was that museums could be a very powerful teaching tool for all pupils regardless of socio-cultural or ability background. While teachers used the museum in different ways with different objectives, there was an overwhelming agreement that the museum experience could result in very positive learning outcomes for pupils.

Teachers were particularly articulate about Enjoyment, Inspiration and Creativity as an outcome of museum-based learning. They also talked about emotional engagement that could not really be called enjoyment but which was to some extent inspirational. Data from the questionnaire confirms this enthusiasm:

- 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.

In discussions, teachers were explicit about the causal link between enjoyment and learning, saying, for example:

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

Above all, teachers felt that the museum could impact on learning outcomes to the extent to which it engaged the pupils' emotional responses. This is regarded as of major importance and achievable for all pupils.

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.

In discussions, it seemed that teachers understood progression as something that would happen in the middle to long term, and thus they were 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.

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.

The least likely skills-related area for learning to occur was in the area of ICT, and here it is very clear that unless teachers are deliberately using the museum to work on and around ICT, these skills are unlikely to be encouraged. The relationship of intention to outcome is again raised by these results.

Teachers' views about what their pupils had achieved did not vary greatly across the 69 museums. Their expectations in relation to their pupils' learning outcomes seemed to be much the same in nearly all instances.

9.8 Teachers' attitudes and purposes

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.

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 students in relation to issues around ethnicity, socio-economic deprivation, cultural entitlement, aspiration, class mobility and inclusion than in 2003. 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, and also the very different ways in which teachers were able to discuss their pupils' learning in this study compared to the 2003 study.

These changes in schooling culture may also lie behind the reduction of use of museums for curriculum-related work. In addition, as reported below, museum education staff have worked hard to integrate museums and schools more closely, and as teachers understand better what museums can offer, their expectations rise and this may contribute to their analysis of the value of museums.

In their discussions of the value of museums to their pupils, teachers highlighted the importance of emotional engagement and the resulting personalised response from pupils. This was perceived as highly significant in stimulating learning. Some very original and successful ways of provoking emotional engagement were observed in museums, and this capacity of museums may be something that should be explored and reviewed further.

9.9 Teachers are satisfied and confident

- 96% satisfied or very satisfied
- 90% confidence in using museums increased

Very large percentages of teachers (74%) across all museums are 'very satisfied' and a further 22% are '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' (30%) or 'very confident' (605) 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.

9.10 The importance of museums to teachers

Museums appear to have become somewhat less important to teachers than in 2003. While 95% of teachers stated that museums were 'important' (49%) or 'very important' (46%) for their teaching, which was much the same as in 2003, the percentage stating 'very important' has fallen from 58% to 46%.

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 while Key Stage had no bearing on teachers' views of the importance of museums for their teaching, whether or not the work at the museum was linked to the curriculum was a major factor. Forty eight percent (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. 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.

9.11 Pupils' views of their own learning

The evidence from the pupils confirms the findings of the 2003 study. Twenty-six thousand seven hundred and ninety-one (26,791) pupils completed Form Bs, with 82% of these (21,845) at KS2 or below and 18% (4,946) at KS3 and above. In terms of gender there was a fairly even division for pupils completing Form B KS2 and below (48% female and 49% male), while at KS3 and above there were more girls (55%) than boys (42%). This was virtually identical to the 2003 study. The age range of pupils is also very similar to the earlier study, with most pupils concentrated in the 8-12 age range.

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

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.

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

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%).

Case-studies revealed some of the factors that influence a productive visit that is likely to result in good learning outcomes. Where all of these factors were in place, the Form Bs yielded more positive responses, and evidence was found of enhanced success levels in assignments.

The study has also found that although the numbers of teachers who are not convinced that their pupils have learnt during their museum visits is very small, the pupils of these teachers are convinced that they have learnt something. A similar result was found when this matching of views was explored in the

study for DCMS that paralleled the 2003 MLA study¹. One case-study that was, in the researchers' views, less than optimum, led to more learning than the researchers expected. Both of these facts, in their different ways, suggest that there is more learning potential to be exploited as a result of museum visits.

¹ 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//l/id1185exec_pdf_6623.pdf

9.12 The impact of Renaissance funding in regional museums

It is clear from the information given by museum staff (in Form D) that in their view Renaissance has had a very strong impact on museums and education. Staff numbers have increased by almost 50% (46%) in the last two years (2003-2005). From other data given by museums (Form C), a large increase in numbers of contacts between museums and school-aged children is reported; a 29% increase in the Phase 2 museums and a 47% increase in the Phase 1 museums.

Museums and schools seem to be developing more integrated ways of working together, and this is having an impact on the way teachers think about museums. All museums report that their relationships with schools have developed through increased number and range of activities, new or enhanced relationships and partnerships, and more positive attitudes from schools, which are using museums more as museums work harder to respond to school needs. Some museums report that because relationships are closer and more collaborative, teachers now have a much better understanding of what museums can offer.

All but one of the museums reported that their support for teachers has improved through new and improved advisory services for teachers, better provision for workshops and taught sessions, up-grading and improvement of teachers' materials and the introduction of new materials, better training for teachers, and a greater awareness on the part of museum staff of teaching and learning. Some reported that in the museum, education staff were more closely integrated into museum culture, contributing to exhibition development and working more closely with curators. Museum education websites are also improved, as is the provision of information in general.

Some changes in school use of museums have been observed. Teachers are more confident and expect more from museums, as their knowledge and understanding of how museums can be used increases. Schools are broadening and deepening the way they use museums, getting involved in longer term relationships and projects. This increase in confidence and the development of critical appreciation of how museums can be used seems to chime well with evidence from other sources. There are some suggestions that Renaissance is beginning to impact on other areas of museum work, although, from the evidence of Form D, this impact is not as strong as it might have been.

Form D revealed few differences between Phase 1 and Phase 2 museums. Educational provision in museums across England is at different stages of development, and in museums in both Phase 1 and Phase 2 Hubs there are both new and well-established services. Because of this, there seems to be very little difference in the ways in which the additional resources involved in Renaissance have been used. As the detailed report in Section 8 showed, there seems little distinction in the use of the additional funding in museums in either Phase 1 or Phase 2. Phase 1 museums continue to use the funds well, and most Phase 2 museums have quickly set plans in motion to enhance educational delivery, especially for schools.

9.13 Reviewing the research processes

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 had been planned. It has been considerably larger than the first study in 2003. The research 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.

The research was commissioned in May 2005 and the final report submitted in February 2006, with a full draft submitted by December 15th 2005. Museums gave out Evaluation Packs between the beginning of September and the end of October. Case-studies and focus groups were set up and carried out between September and November. The period of time over which the research was carried out, although stretching across many months, would have been easier for researchers and research participants to manage had it been longer.

The Generic Learning Outcomes approach has been used to shape this research study and its analysis, and the GLOs have proved adequate to encompass, describe and analyse all dimensions of the evidence of learning generated by the research methods. This is the third very large national study that has used the GLOs and together with the other two studies, this report provides evidence and examples of how the GLOs can be successfully used to both provide numerical data concerning the impact of learning (which is required for the purposes of accountability) and also to describe the complexities and detail of museum-based learning. This study has shown that while each individual GLO can be identified for the purposes of research and analysis, they are closely interwoven in practice. There is a great deal that can be learnt from a close study of these reports.

It is also interesting to note that in 2005, teachers were much more attuned to an outcome-based approach to learning than they were in 2003, and had far fewer difficulties in responding to outcome-based questions. In part, this was because we could show them evidence of what we were looking for from the earlier studies, but it is also probably an effect of current government requirements.

During the research processes, we became more alert to a distinction between the GLOs as a conceptual and theoretical framework and how researchers can talk to teachers about learning outcomes. The GLOs provide a conceptual framework for research design and analysis, and while this conceptual framework provides the structure of research tools, the language used to relate the conceptual structure to teachers' understanding can and should vary. There is no reason why teachers have to understand the GLO approach to research and evaluation. The approach can be used to probe teachers' (and others') understanding, but the language used to do this can relate more closely to language that teachers use and recognise. This became very clear when we asked teachers about Skills as a learning outcome. It was not until the expression 'skills audit' was used that teachers could see what we meant and give us the information that we were looking

for. The GLOs work very well indeed as a conceptual and reporting structure, but the language used in classrooms may change, and researchers need to understand this and develop a view of the relationship between current expressions (which will change over time) and the names used for each of the five Generic Learning Outcomes, which (because they are very basic) will remain stable.

The research team would like to acknowledge with thanks the co-operation and help they received during this research study from the museum participants and from MLA.

9.14 Museums and government agendas

This research study has been carried out at a time when education policies and strategies have been developing rapidly. Some of these policies and strategies were outlined in Section 1 and there are references to government agendas throughout much of the report. The many diverse ways in which museums can contribute to government strategies is explored below, focusing on how museums promote creativity, how museums can help build personalised learning and how museums can help deliver *Every Child Matters*.²

9.14.1 Museums promote creativity and this could be further exploited

Creativity is high on the agenda of educational policy-makers and schools, but considerable development is still needed for creativity to be embedded into classroom teaching and learning. Museums are seen by teachers, and by pupils, as places where creativity can flourish, where new ideas are generated and where experiences can be inspirational.

Some schools are incorporating teaching for creativity into classroom work, and a small minority have policy statements on the encouragement of creativity and have developed a collective understanding of this complex concept. However, there are also a considerable number of schools where teachers do not know how to develop creativity in their pupils, are uncertain about the meaning of the term, and do not know how to adapt their teaching.³ Many teachers assume that creativity is inherently connected with art and design, and do not understand that creativity is a generic quality.

Museums are already valued by some schools for their expertise in promoting creativity.⁴ Much museum-based teaching is itself creative, using a range of skills and strategies that harnesses the enquiry and enthusiasm of pupils. In addition, however, the planning and development of museum-based workshops are designed to promote creative responses in participants.

This research study shows how highly both teachers and pupils value and are using museums for their capacity to stimulate creativity. When asked 'To what extent will you be using the museum to promote creativity?' teachers responded:

Enjoyment, Inspiration, Creativity	'Very likely' and 'likely' all museums 2005
Exploring new ideas	88%
Creative writing	74%
Designing and making	76%
Other forms of creative work	70%
Dance/drama	49%

² Department for Education and Skills, *Every Child Matters*,

<http://www.everychildmatters.gov.uk>

³ Office for Standards in Education (2003) *Expecting the unexpected: developing creativity in primary and secondary schools*. HMI 1612, e-publication, 17-19.

⁴ Ibid: 5, 16.

The work that children do in museums is imaginative and purposeful, setting the scene for innovation and valuable outcomes. While some schools are already using museums as external partners to promote creativity, this research suggests several ways in which this could be extended.

In many schools, cross-curricular opportunities are used to stimulate creativity⁵ and some of the most creative work observed by HMI was interdisciplinary⁶. 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. Museum displays are thematic and cross-curricular and objects are inherently interdisciplinary. 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.

Museums and galleries are already synonymous in the minds of many teachers with creativity; teachers use museums because of their potential to stimulate the imagination, to raise questions in children's minds, and to engage pupils of all ages in critical reflection and emotional responses. This view of museums could be built upon to develop discussions between teachers and museums which reflected on creativity to develop a more complex understanding of what this can mean and how it can be promoted.

Museums can enable teachers to broaden their range of teaching styles and develop further their disposition and pedagogy for creativity. Museum educators routinely use a range of teaching styles during one school visit and experienced museum educators use objects, buildings, sites, materials and specialised individuals such as actors, artists or curators as part of their teaching repertoire. In addition, museum educators are highly skilled at teaching for multiple personalised outcomes through adopting an open-ended, enquiry-based and activity-led approach. Demonstrations and team-teaching could be used to enable teachers to explore some of these creative teaching methods. The secondment programme sponsored by DCMS offers opportunities and could be taken as a model for expansion.

9.14.2 How museums can help in the development of personalised learning

Personalised learning focuses on the drive to tailor learning to the needs, interests and aptitudes of individual learners. It is a key issue in debates about current educational strategies⁷ and this research suggests that museums should be part of this conversation. While museums have already developed strong and effective partnerships with schools, the character of museum-based learning could be further considered within the contexts of personalised learning.

⁵ Ibid. 13.

⁶ Ibid. 18.

⁷ Department for Education and Skills, (2004) *A national conversation about personalised learning*, DfES/0919/2004

What did you learn at the museum today? Second study 2005 contains strong evidence that museums capture the enthusiasm of pupils of all ages and abilities, regardless of their social or cultural backgrounds. In part, this 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. Personalised responses lead to the development of individualised relevance – ideas, objects, relationships, events become meaningful. Through this, pupils can flourish as individuals.

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

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

Teachers appreciate the generative qualities of museums - how museum experiences generate learning through enjoyment and curiosity. In many museums, the atmosphere induces behaviour for learning, and behaviour for progress and enjoyment.

Diverse learning styles can be used in museums, and this is a major strength of a museum visit. The varied learning styles to be found in museum and gallery settings for learning frequently arise through physical activity, and can include object handling, analysis of visual displays, drawing, drama, group discussion, questioning, listening, team-work, and problem-solving. Through choosing from the diverse range of learning styles which are on offer during most museum workshops or visits, pupils can respond in ways that confirm their individual learning strategies, some of which are not always validated in classroom situations. This is particularly effective in the case of those who are not strong in conventional academic skills.

This research has found evidence of personal responses which take the form of:

- 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.
- Use of preferred learning styles
- Aesthetic response to specific objects or buildings
- Building of confidence in individual capacity to understand and perform

- Stronger relationships between individual pupils and their peers as the result of shared experience

Pupils are aware of the potential of museums for learning, and are frequently confident that they have indeed learnt something. They have also been observed expecting their learning to be manifested in assessed work for which they expect to, and sometimes do, achieve higher grades. Teachers are less consistently confident about their pupils' learning, and this research shows that even where teachers are not confident that their pupils have learnt, those pupils are. The learning potential of museums could be further exploited, especially in relation to the development of strategies to personalise learning.

9.14.3 The contribution of museums to *Every Child Matters*

In *Every Child Matters* the government set out their proposals for working towards ensuring that every child had the chance to fulfil their educational potential through:

- being healthy
- staying safe
- enjoying and achieving
- making a positive contribution
- economic well-being

Every Child Matters underpins all government strategy to do with children and young people. *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.

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, especially for those that find more academic approaches difficult. Pupils are able to deploy a broad range of learning styles, and respond to open-ended events in diverse ways. While this makes learning exciting and enjoyable for all pupils, it is an essential pathway to progression for those that find learning a challenge.

Every Child Matters understands that organisations must broaden opportunities for all children to reach their individual potential and museums can be very effective at this, particularly with older pupils. While pupils at KS2 and below are frequently spontaneously enthusiastic, older pupils find this more difficult. However, the research found many instances of older pupils talking about how they found museums cool and interesting, rather to their surprise, and how they would need to change their views about museums. Sometimes older pupils reported their emotional responses to their experiences in museums, again, to their own amazement. The *Key Stage 3*

*National Strategy*⁸ suggests a climate for learning that contains two elements which are important for effective learning. These are the use of diverse learning styles and the acknowledgement of pupils' prior knowledge as a basis from which to build. While museum educators cannot be aware of the prior knowledge that each pupil brings to the museum experience, learning in museums is sufficiently open-ended and interdisciplinary for all young people to use what they already know to make sense of their experience at the museum.

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. This research has found that special schools 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. There is a long-standing and successful relationship between special schools and museums, which this research confirms. Many special schools use museums frequently, and it may in some ways be easier for them to do so because they work with smaller groups of pupils, have easier access to transport than other schools, and have a more flexible timetable.

Museums are significant players in working towards social inclusion, as these findings demonstrate. According to our analysis of schools in relation to the deprivation indices, the 69 museums in this 2005 study are working with schools that are located in areas at all levels of deprivation, but disproportionately more schools than would be expected are located in the most deprived areas. Of school visits to museums, 32% are located in the 20% most deprived areas (SOAs) in England. Considering the actual schools visiting museums in relation to the percentages of pupils eligible for free school meals, 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.

Museums are already making a strong contribution to inclusiveness in educational provision. With the new emphasis on education outside the classroom⁹, this contribution can be extended.

⁸ Department for Education and Skills, 2003, *Key Stage 3 National Strategy: introducing the third year*, 23.

⁹ Department for Education and Skills, 2005, *Education Outside the Classroom Manifesto*,
<http://www.dfes.gov.uk/consultations/conDetails.cfm?consultationId=1370>

9.15 Final conclusions

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

9.15.2 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.

9.15.3 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.