Now and the future

A review of formal learning in museums

ARTS COUNCIL ENGLAND

Contents

Acronyms

ACE	Arts Council England
AHRC	Arts and Humanities Research Council
AIM	Association of Independent Museums
AMA	Associateship of the Museums Association
APPG	All Party Parliamentary Group
DCMS	Department for Culture, Media and Sport
DfE	Department for Education
Ebacc	English Baccalaureate
EEF	Education Endowment Foundation
engage	National Association for Gallery Education
ESOL	English for Speakers of Other Languages
GCSE	General Certificate of Secondary Education
GEM	Group for Education in Museums
GLO	Generic Learning Outcome
GSO	Generic Social Outcome
HE/HEI	Higher Education or Higher Education Institution
HLF	Heritage Lottery Fund
HMI	Her Majesty's Inspectors
ILFA	Inspiring Learning for All
ITT	Initial Teacher Training
LCEP	Local Cultural Education Partnership
MA	Museums Association
MDO	Museum Development Officer
Nesta	National Endowment for Science, Technology and the Arts
NSEAD	National Society for Education in Art and Design
Ofsted	Office for Standards in Education
PGCE	Postgraduate Certificate in Education
QTS	Qualified Teacher Status
SCITT	School-centred Initial Teacher Training
SEND	Special Educational Needs and Disability
SLE	Specialist Leader in Education
SLICE	Specialist Leader in Cultural Education
SMSC	Spiritual, Moral Social and Cultural development
STEAM	Science, Technology, Engineering, Arts and Mathematics
STEM	Science, Technology, Engineering and Mathematics
TES	Times Educational Supplement
UCAS	Universities and Colleges Admissions Service

Foreword

Every child should benefit from the opportunity to study cultural education subjects to a high level in the classroom throughout their schooling. In addition they should have access to a rich and varied set of opportunities to enjoy artistic and cultural activities outside the classroom.

Museum learning has a vital role to play in the cultural education of all children and young people. Thousands of school children throughout the country benefit from the unique learning environment that museums can offer and the inspiration and ambition created from wonderful collections and stories that are embedded in our museums and cultural heritage. Their education is greatly enriched through interaction with curators in museums up and down the country.

The research outlined in the pages that follow examines the role that museums across the country plan in relation to formal education. This project has been led by CAPEUK, one of the Arts Council Council's 10 Bridge organisations, which is responsible for developing cultural education across the country. We are grateful to the steering group who worked alongside CAPEUK to ensure that voices from across the sector were listened to.

Clear recommendations have been set out based on comprehensive data; best practice case studies; and workable business models for delivery. Examples are included throughout this report.

This is one of several pieces of research that will help Arts Council plan its investment going forward. I hope the sector sees this as a vital development tool for improving formal learning in museums.

Darren Henley OBE,
Chief Executive, Arts Council England

CapeUK would like to thank the steering group for this research: Nikola Burdon, Relationship Manager, Museums, Arts Council England; Bill Griffiths, Head of Programmes, Tyne & Wear Archives & Museums; Vivien Niblett, Senior Officer, Policy and Research, Arts Council England; Lindsey Pugh, Senior Manager: Children, Young People & Learning, Arts Council England; Liz Smith, Director of Participation and Learning, National Portrait Gallery; Esmé Ward, Head of Learning and Engagement, Manchester Museum and The Whitworth Art Gallery. We are also very grateful for the help provided by colleagues at A New Direction, London, in running our focus group for secondary teachers.

' Britain is blessed with some of the most awe-inspiring cultural treasures on the planet. Our museums, theatres and galleries, our exhibitions, artists and musicians, they are truly the jewel in our country's crown. And culture should never be a privilege; it is a birth right that belongs to us all.'

David Cameron
Former Prime Minister's speech on life chances
18 January 2016
www.gov.uk/government/speeches/prime-ministers-speech-on-life-chances

CapeUK has been at the forefront of creative education for almost 20 years, as a creative learning organisation, using innovative approaches to offer children and young people opportunities to thrive and develop their potential as creative citizens. Since 1997 CapeUK has worked with hundreds of museums, arts and cultural organisations and education settings, bringing creative learning to over 400,000 children and young people. CapeUK has extensive experience of using research, reflection and evidence-gathering as a learning process which acts as a catalyst for positive change.

More information is available at www.capeuk.org

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Executive summary

Rationale for research

This review of formal learning in museums for children and young people aged three to 19 years old considers how museums are responding to a fast-changing educational and funding landscape. It addresses four main questions:

- What is the current offer of formal learning delivered by museums?
- How do museums and schools assess the quality of the offer?
- How is formal learning developed, delivered and resourced by museums?
- What are the barriers and enablers of delivering and sustaining a high quality formal learning offer?

Research methodology

The research has been carried out by a combination of online survey, focus groups with teachers and museum educators, a telephone survey of Museum Development Officers and Bridge organisations, one-to-one interviews with museum directors and other key stakeholders, and general desk research. It draws on the views and experience of approximately 340 individuals and organisations.

The recent history of museum education

The review looks back at the changes that have taken place in museum education since the publication of David Anderson's *A Common Wealth* in 1997, which found that approximately 50 per cent of museums made no deliberate provision for education and argued for a renewed focus on the learning power of museums. His report heralded a period of sustained investment through Renaissance in the Regions that transformed the priority and status given to formal learning in museums.

Since 2011, when Arts Council England took over responsibility for museums from the Museums, Libraries and Archives Council, formal learning in museums has become more closely aligned with a larger "cultural learning" or "cultural education" agenda that also encompasses the arts. However, our review found that there is some residual feeling among museum educators that the distinctiveness of museum pedagogy could be better articulated at a policy level and that science learning, in particular, requires more explicit acknowledgement in the discourse surrounding cultural education.

Current educational agendas

The review examines how structural changes in the education sector since 2010 have impacted on the way that museums deliver services for schools. Under the government's academies programme schools have greater autonomy than before and are increasingly expected to work together in a syndicated model of educational provision, including providing school-based approaches to initial teacher training. The EBacc performance measure, pupil premium and the so-called "life chances" agenda have given a renewed urgency to raising attainment, especially in parts of the country (e.g. some towns and cities in the North and coastal towns) where Ofsted has signalled concern about declining educational standards.

Museum educators are eager to respond to these agendas and point to evidence that learning in museums enhances the motivation, confidence, enjoyment and understanding that underpin academic achievement. Yet our research also highlights concerns that accountability measures discourage creative teaching strategies where they are needed most. In navigating this new educational landscape and seeking to influence its priorities, our report suggests that museums should act in partnership with other cultural organisations to pool effort, advocacy and resources.

What is the current offer of formal learning delivered by museums?

Our consultation finds that museums are offering a more responsive service for schools than they were 20 years ago. Most survey respondents offer facilitated and/or self-directed visits, generic risk assessments, outreach sessions and learning resources, and approximately half offer loan collections and professional development for teachers. Thirty-seven per cent report that the priority given to formal learning has increased in the last three years for reasons which include external investment (eg from Arts Council England and the Heritage Lottery Fund) and the prioritisation of activity that generates income. However, some consultees are worried about their ability to sustain a formal learning offer once time-limited investment has ended.

Our survey suggests that the large majority of school visits to museums are still made by primary schools, with 19 per cent of respondents reporting that the balance has shifted further towards primary education

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and away from secondary education in the last three years. Successful approaches to engaging secondary schools often appear to focus on opening up routes to higher education and future careers.

Forty-nine per cent of survey respondents record an overall increase in school visits in the last three years, but without secure historical data or a breakdown of new versus repeat visits it is hard to account for this improvement with certainty. Many education services have seen increased take-up by early years and special educational needs providers and some also report that outreach is in growing demand as an alternative to taking children and young people out of school. However, excellent progress in some places masks a downward trend elsewhere, with some museums reporting a sharp decline in visits by schools.

The new national curriculum has presented both opportunities and challenges for museums. Museums offering topics that no longer feature in the history curriculum (eg the Tudors, Victorians and the Second World War) initially experienced a drop in demand. But many have developed new sessions (eg around prehistory or evolution) or have been nimble in linking familiar activities with literacy or local studies. There is some evidence that museums are helping teachers respond positively to the complex issues inherent in spiritual, moral, social and cultural education. Demand appears to be increasing in history and science and, to a lesser extent, in English (or literacy) and art. However, some museums also report that art-related visits are in decline, which they ascribe to the marginalisation of art and design in a curriculum that prioritises EBacc subjects.

Many museums have embraced Artsmark and Arts Award, with only 39 per cent of survey respondents not involved in any way with either scheme. But while some museums welcome Arts Award as a way of strengthening their relationship with local schools, others are daunted by the cost and effort of delivering the scheme. There is also a perception among some museum educators that Arts Award is not yet sufficiently responsive to the requirements of the heritage sector.

How do museums and schools assess the quality of the offer?

In defining what is meant by "quality", a consistent theme in responses by museums to our survey is the need for dialogue, flexibility and the close encounter with real objects, supported by people who can offer first-hand, expert knowledge of their subject. They report that teachers are more than ever attuned to the benefits of cross-curricular learning, while teachers in turn confirm that they want to explore broad topics, with plenty of curriculum links. But teachers are equally clear that learning in museums should go beyond the curriculum and be different from classroom lessons – more interactive, experiential and exciting. Museums also remain important to them as a source of authoritative knowledge.

Museum educators employ a variety of methods to plan and assess the impact of learning, often customising such frameworks as Inspiring Learning for All, the Arts Council's Quality Principles, the Sandford Award criteria and Learning Outside the Classroom indicators. Several larger museum services have developed their own toolkits in order to promote a shared organisational understanding of what is meant by "excellence". Fifty-nine per cent of survey respondents involve children and young people visiting with schools groups in feeding back about their experience, while 38 per cent say they do not currently do so.

Our consultation found that museum educators are eager to evidence the collective impact of the sector in ways that meet the priorities of government, local authorities, other educational stakeholders and schools, but recognise that this requires research capacity which most museums on their own cannot muster. Some larger museums, especially in urban areas with a university partner close at hand, are engaged in long-term research with partners in higher education. Overall, however, our report concludes that the sector would benefit from a more coordinated approach to ongoing evaluation and long-term educational research.

How is formal learning developed, delivered and resourced by museums?

In the absence of consistent sector-wide approaches to data collection, it is hard to be certain about the trajectory of formal learning in museums since 2010. Such data as does exist relates to larger museums (eg national and Major Partner Museums) that are relatively well resourced. It is nevertheless clear from our research that reductions in public expenditure, especially in local government, have adversely affected formal learning provision in museums and remain a threat in some places.

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Our research reveals considerable divergences in capacity and resources. Almost 50 per cent of survey respondents say staffing levels have stayed the same in the last three years; 24 per cent report a decrease and 22 per cent an increase. There is also evidence of an increased reliance on freelance staff and volunteers. Budgets are under pressure, with 31 per cent of survey respondents saying that their budget has decreased in the last three years (as opposed to 16 per cent who say it has increased and 46 per cent who say it has stayed the same).

The imperative to generate income has led to new charging models in many museums and, in some places, competing pressures on physical space. Approximately half the museums in our survey have some kind of income target and say it has become more difficult to meet that target in the last three years. Sixty-four per cent of respondents say that schools "paying for services" now contributes to core funding, but with many also reporting that charges have not impeded the take-up of activities.

Although some museums have successfully developed a more commercial and entrepreneurial approach to providing services for schools, it is clear that many would benefit from guidance and support in re-thinking their delivery model to make it more sustainable.

What are the barriers and enablers of delivering and sustaining a high quality formal learning offer?

The first requirement of a successful service for schools is a programme that responds constructively to the national curriculum. Our research suggests that changes in the curriculum have proved problematic for museums with a long-established offer based on topics that are no longer taught, but that new curriculum areas have also opened up opportunities for innovation.

A key theme emerging from our research is the value of long-term partnership and consultation with teachers. Through teachers' advisory groups and other schemes such as Specialist Leaders in Cultural Education (SLICE), many museums are co-producing resources and programmes of activity that "wrap around" and extend the impact of the one-off museum experience, as well as encouraging repeat visits.

Teachers and museum educators often cite the cost of transport as the main barrier to schools using museums, with rural museums at a considerable disadvantage because of the larger distances and costs involved in getting from A to B. Subsidised travel from Transport for London gives schools in London an advantage over most other parts of the country. But many of those consulted point out that travel costs are not an obstacle for the many schools which do use museums. The challenge for our sector is therefore to persist in making a powerful case to schools for the value that museums can add to classroom learning.

Consistent data-collection is seen by many museum educators as the key to targeting non-user schools and areas of low engagement. However, it would appear that fewer than half the respondents to our survey are collecting the kind of socio-economic data relating to educational audiences that would enable a more analytical approach. Our research suggests that there is scope for developing more guidance and support at a national and regional level to enable this to happen.

The emergence of a placed-based curriculum has been a powerful enabler of formal learning in museums in many parts of the country, with such initiatives as the Royal Society of Arts' Area-based Curriculum and Historic England's Heritage Schools Programme showing how museums can nurture a strong sense of place. Proposals in the government's recent Culture White Paper for Heritage Action Zones, a new Great Place scheme and a Cultural Citizens Programme, based in areas of high deprivation and low engagement, will create more opportunity for museums to build on what has already been achieved. Local Cultural Education Partnerships will be crucial in enabling this to happen.

Our consultation suggests that partnerships between national and regional museums have been instrumental in supporting new approaches to working with schools in many places. For example, the Department for Education (DfE) funded Museums and Schools programme has encouraged schools to embed museum learning in a long-term programme of enquiry involving several visits and has left a lasting legacy of online resources. Many in museums would like to see the advocacy and professional development remit of national museums expand, although they acknowledge the resource implications and the difficulty of forging the right collaborative model.

The review finds that digital technology is both a barrier to and enabler of formal learning in museums. Many museums struggle to maintain an effective web presence and keep up with the fast-changing

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pace of digital technology. Only 45 per cent of survey respondents have internet access in gallery spaces; 51 per cent have internet access in education spaces and basic infrastructure is particularly uneven in rural locations. Thirty-one per cent of survey respondents did not consider it desirable to have an online booking system.

Our survey and focus group discussions found that teachers and museum educators are sometimes conflicted about the place of digital technology in museums, because they value the encounter with real objects and the mediation of museum experts. But they nevertheless recognise that children and young people now expect to access digital technology in every aspect of their lives.

The review draws attention to various portal websites specifically aimed at teachers or at children and young people (My Learning, Connecting with Culture and Show Me), digital resources developed as part of a 'blended' learning experience, and gaming technologies and digital animation being employed to bring collections, sites and ideas to life. Many museums are also using existing platforms such as YouTube, TES Global, the Google Cultural Institute and Historypin for promotional and interpretive purposes. Many of those consulted would like to see national museums do more to share their digital expertise, for example by convening web-based educational initiatives that highlight objects in regional museum collections.

Among the factors that support the development of formal learning in museums, professional development is critically important. Our consultation indicates that museums educators are finding it hard to take time away from day-to-day delivery and would welcome more coordination of effort among the sector's lead bodies, both in training the workforce and advocating to government, funders and the education sector.

GEM and engage are highly valued for the training they offer at various levels, as are the Museums Association and the Association of Independent Museums. Many respondents to our survey and focus group also receive excellent support from Museum Development Officers and regional Bridge organisations. There is, however, some uncertainty about how the roles and remits of these organisations inter-connect and a perception that they could work more cooperatively in some places. The Local Cultural Education Partnerships which the Arts Council is establishing in 50 different locations represent an opportunity for collaboration which museums must grasp if they are to work more fruitfully with the wider cultural and education sectors.

Our review concludes that formal learning in museums is no longer a fashionable agenda, compared with the situation before 2010. Yet museum educators are well aware that successful work with schools represents our best chance of extending cultural entitlement to all children, regardless of their social background or where they live. For that reason they would like to see greater connectivity within the sector and stronger collective advocacy. But they also emphasise that integration needs to be facilitated and resourced if it is to become more than a rhetorical exercise and they remain worried about the effect of cuts in public spending on the collections that provide the rationale for all museum learning.

1. Introduction

1.1 Research questions and methodology

This report represents the first attempt in many years to build up a comprehensive picture of what is happening to formal learning provision in museums for children and young people aged three to 19 years old.[1] It was commissioned in response to an educational and funding landscape that is changing fast and will no doubt continue to change rapidly over the next few years. Indeed, even as we were finalising our research, the government published Education and Culture White Papers that will frame the future development of museums and the educational services they provide.

Our review set out to answer four questions and, in doing so, elicited an overwhelming response from museum educators eager to share their experience and opinions. We are grateful to the many people who took part in focus groups, talked over the phone or shared information and observations in our online survey. We have tried to reflect the variety of the views submitted and show the range of ways in which museums are adapting to political, educational and financial challenges. While it has not been possible to reference all the evidence that came to our attention, every comment and case study has had a bearing on the tenor of the review and its conclusions.

Research questions:

1. What is the current offer of formal learning delivered by museums?
2. How do museums and schools assess the quality and impact of the offer?
3. How is formal learning developed, delivered and resourced by museums?
4. What are the barriers and enablers of delivering and sustaining a high quality formal learning offer?

The sheer diversity of the museum sector is a challenge for any researcher. Museums come in many shapes and sizes, from the largest national museum with a cast of hundreds to the smallest independent museum run by a small band of volunteers. They are as likely to include veteran aircraft as Victorian costume, taxidermied animals as topographical paintings, the most ancient of fossils as the newest items of football memorabilia.

If the enthusiastic response to our research is anything to go by, however, they are all united by one thing: an absolute commitment to using collections for public benefit and a large reservoir of generosity, ingenuity and expertise. It seems that the educational mission of the museum is in good hands, however much external circumstances may complicate its delivery.

This review is based on a combination of quantitative evidence, drawn mainly from responses to an extensive online survey, and the qualitative insights gained from focus groups, one-to-one interviews and desk research. Alongside the survey, nearly 80 other individuals were interviewed or consulted, including teachers, academics, museum educators, museum directors and senior figures in the sector's lead bodies. A full list of consultees can be found in Appendix one.

The main data tables from the online survey have been analysed in Appendix two, with an indication of where geographic location, size and type of museum have produced a significant variation in response. Bearing in mind that the museum workforce is the subject of a parallel Arts Council enquiry, it seemed important for this research to capture an organisational perspective rather than an individual one. We have also directed our primary research at museums rather than schools, because the existing evidence-base relating to the education sector is readily available and already very substantial.

Research methodology:

- An online survey (which attracted 260 valid responses from a sample that corresponds closely with the breakdown of the sector provided by accreditation data)
- Two focus groups for teachers (both primary and secondary)
- One focus group for "learning leads" in museums
- Telephone survey of Bridge organisations and Museum Development Officers (MDOs) in every region
- Stakeholder interviews (eg with key representatives of lead agencies in the museum sector)
- Interviews with seven museum directors
- Desk-based literature and policy review

1 Throughout this report the term "museum" also refers to art galleries.

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1.2 Research context

The commitment of museums to public education is matched by the high regard in which museums are held by the general public. Research commissioned by the Museums Association in 2013 indicates that people in Britain continue to view museums as the trusted guardians of our past and present, and value them as places where "all sides of the story" can be told.[2] They see the museum's educational role as an essential purpose and children as a primary audience. But much as people affirm and feel an emotional attachment to the custodianship function of museums, they also fear that they are under threat from reductions in public funding, technological advances and what they perceive to be declining attendance. They understand that museums must adapt to prosper.

At the same time the world of education is undergoing its own process of transformation. Politicians, parents, teachers and educationalists might broadly agree about what education is for: ideas about economic utility, social responsibility, creativity, personal fulfilment and the acquisition of knowledge and skills would no doubt feature in any list of desirable outcomes. However, agreeing the relative importance of these outcomes or how they might be achieved is a matter of enduring disagreement and debate.

> 'Education has an emancipatory, liberating, value. I regard education as the means by which individuals can gain access to all the other goods we value – cultural, social and economic – on their terms. I believe education allows individuals to become authors of their own life story…
>
> Education should be a process of granting every individual their rights to that inheritance. Every child should have the chance to be introduced to the best that has been thought, and written. To deny children the opportunity to extend their knowledge so they can appreciate, enjoy, and become familiar with the best of our civilization is to perpetuate a very specific, and tragic, sort of deprivation.'
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> Michael Gove MP, Secretary of State for Education (2010-14), speech to Royal Society of Arts, 30 June 2009
>
> www.thersa.org/globalassets/pdfs/blogs/gove-speech-to-rsa.pdf

In 2010 the incoming coalition government embarked on a programme of educational reform that is gathering pace under the present Conservative administration. A new curriculum took full effect in September 2015 and government has since confirmed that it would like (but will not compel) all schools to become academies.[3] The educational landscape is changing and so, too, are many other aspects of the external environment in which museums operate. It seems timely, therefore, to look at how museums and schools can develop and sustain the symbiotic relationship that characterises the best educational practice in the sector.

Our report takes the form of a narrative, incorporating policy analysis, historical data, survey evidence, opinion and illustrative case studies, with the headline findings of our survey and focus group discussions presented in a separate appendix. It is, to some extent, a stock-taking exercise. But it also looks ahead, with recommendations which we hope will inspire us all – funders, museum professionals, educationalists, professional bodies and teachers – to work more productively together in the future for the benefit of children and young people in our education system.

Museums open up opportunities for experiential, enquiry-based learning that bring ideas and knowledge investigated in the classroom vividly to life. Their power to excite curiosity, explain and inspire adds a new dimension to children's learning and makes it memorable. At their best, they are sites of learning that inform not just the past, but also what we individually and collectively might become. It is our belief that better formal learning in museums makes for better schools and, in turn, prepares children and young people to become better citizens and custodians of our future.

2 BritainThinks, *Public perceptions of – and attitudes to – the purposes of museums in society*, Museums Association, March 2013. Unusually among research reports about museums, this one focused on what the public think about museums. www.museumsassociation.org/download?id=954916

3 www.gov.uk/government/news/next-steps-to-spread-educational-excellence-everywhere-announced

2. A changing landscape

2.1 Looking back: *A Common Wealth* and after

In order to look forward, it is sometimes useful to cast a glance at how we got to where we are now. Many in museums will remember the impact of David Anderson's report *A Common Wealth: Museums in the Learning Age* in 1997. Compellingly researched and argued, this UK-wide review of museum education saw formal and informal learning as a lifelong process and museums as having a powerful role to play in community development.

It coincided with the publication of the Kennedy, Dearing and Fryer reports on further, higher and continuing education respectively and preceded by only a few months the election of a Labour government that put education at the forefront of its political programme. All these initiatives, many instigated by the previous Conservative administration, envisaged learning as a lifetime's entitlement and endeavour.

With a distance of nearly 20 years, it is instructive to look back at the situation Anderson's review uncovered. It may come as a surprise, for example, to learn that until 1993 Her Majesty's Inspectorate (HMI) published valuable surveys on the educational use of museums – a striking indication of the place museums then occupied in mainstream educational thinking. Overall, however, provision for museum and gallery education in the UK in 1997 was a patchwork. Approximately 50 per cent of museums made no deliberate provision for education; 15 per cent made almost none and in the remaining 35 per cent it ranged from basic to comprehensive. Only one in five museums had an education specialist on their staff.[4]

The publication of *A Common Wealth* inaugurated a period of sustained investment in museum education that led to a large increase in the number of school-age children and young people using museums in support of learning. The Museums and Galleries Education Programme, Strategic Commissioning, Creative Partnerships and a multitude of other initiatives dedicated to active learning both inside and outside the classroom inspired museums to improve their services for schools and other learners, within a policy framework that emphasised social outcomes as well as educational benefit.

In the background, organisations such as the Campaign for Learning, Learning Outside the Classroom and Kids in Museums also urged the adoption of child-friendly policies and programmes. Most decisively of all, Renaissance in the Regions provided, for the first time ever, annual financial support from central government to leading regional museums and promoted a stronger sector-wide approach to developing and delivering services for schools.

In the lexicon of day-to-day museum practice "education" now became "learning", a semantic shift that expressed a supposedly less didactic, more user-centred conception of learning in museums and mirrored wider developments in educational discourse.[5] Funding to regional museum "hubs" through Renaissance in the Regions was tied to the development of a "comprehensive and integrated" education delivery plan, informed by consultation and collaboration with other agencies, above all Local Education Authorities.[6] Museums in receipt of Renaissance funding had to meet stringent targets, including a 25 per cent increase in the number of contacts between school age children and regional museums by 2005/06.

At the time many museum professionals and commentators expressed unease about the use of cultural activity to achieve social policy objectives. But museums nevertheless welcomed the investment and, on the whole, enthusiastically embraced a more consultative approach to devising and delivering education programmes. In the new era of evidence-based policy-making ushered in by the "New Labour" government, they also accepted the need to research and demonstrate the impact of their educational services.

4 Anderson, David, *A Common Wealth: Museums in the Learning Age*, Department for Culture, Media and Sport, 1991 (first edition 1997), page 3

5 See Hooper-Greenhill, Eileen, *Museums and Education: Purpose, Pedagogy, Performance*, 2007, page 4

6 *Renaissance in the Regions: a new vision for England's museums*, Resource: The Council for Museums, Archives and Libraries, 2001, page 40

2. A changing landscape continued

Inspiring Learning for All and Generic Learning Outcomes

Inspiring Learning for All (ILFA) is a performance improvement framework which promotes best practice and helps organisations assess the impact of their activities. It revolves around the "four Ps": **P**eople, **P**laces, **P**olicies, plans and performance, and **P**artnerships.

ILFA sits alongside a set of Generic Learning Outcomes (GLOs) which quantify what people learn from cultural experiences:

- Knowledge and understanding
- Skills
- Attitudes and values
- Enjoyment, inspiration and creativity
- Activity, behaviour and progression

The Inspiring Learning for All (ILFA) framework, launched by the Museums, Libraries and Archives Council in 2003, gave the sector a common language to describe the impact of government investment in museum education and facilitated the capture of large amounts of data relating to hundreds of thousands of learners. Alongside the ILFA planning framework, a set of "generic learning outcomes" (GLOs) explained in straightforward language what children, young people and adult visitors could be expected to learn from visiting a museum. Generic Social Outcomes (GSOs) were subsequently also developed to help the sector align its activity with community, civic, health and well-being agendas in public sector policy.

By 2010 the body of evaluation relating to the impact of museum education had increased markedly, backed up by a growing body of academic research about the pedagogical distinctiveness of object-based learning.[7] The physical space for display and learning had increased too, thanks to funding from the Arts and Heritage Lotteries, European structural funds and private charitable sources such as the Clore Duffield Foundation. Well-equipped facilities, complete with cloakrooms, sinks, lunch-rooms and internet access, brought about a step-change in the level of customer care for schools.

These developments also affirmed the status of educators within the museum workforce. In 2013 an Arts Council England enquiry into the future of museum learning for children and young people found a cadre of educators able to articulate "a sophisticated model of museum learning through enquiry" and committed to continuous improvement.[8] The question now is how this position of strength can be maintained, in the face of funding pressures, educational reform and the wider reorganisation of public services.

2.2 Arts Council England and cultural education

The election of the coalition government in 2010, coming hard on the heels of the financial crisis of 2008, led immediately to sharp reductions in public expenditure and wholesale reorganisation of the system of support for regional museums. With the abolition of the Museums, Libraries and Archives Council in 2011, responsibility for regional museum funding passed to Arts Council England (ACE) and Renaissance-funded museum "hubs" gave way to a smaller network of Major Partner Museums.[9]

7 See for example DeWitt, J, Osborne, J, 'Supporting Teachers on Science-focused School Trips: Towards an integrated framework of theory and practice', *International Journal of Science Education*, Volume 29, Issue 6, May 2007; *Understanding the impact of engagement in culture and sport: A systematic review of the learning impacts for young people*, The EPPI-Centre (Institute of Education, University of London), July 2010; Foreman-Peck, L, Travers, K, 'What is distinctive about museum pedagogy and how can museums best support learning in schools? An action research inquiry into the practice of three regional museums', *Educational Action Research*, v21 n1 p28-41, March 2013; Watermeyer, Richard, 'Science engagement at the museum school: teacher perspectives on the contribution of museum pedagogy to science teaching', *British Educational Research* Journal, Vol. 41, No. 5, pp. 886-905, October 2015

8 Cairns, Sam, *Thinkpiece for Future of Museum Learning for Children and Young People Enquiry*, Arts Council England, July 2013

9 The number of Major Partner Museums increased from 16 to 21 in 2014.

2. A changing landscape continued

From December 2010, the Arts Council began to put in place the strategic framework that would govern its newly expanded sphere of influence and introduced the term "cultural learning" or "cultural education" to describe the work that arts organisations and museums carry out with children and young people.[10] A further crucial element of the infrastructure was the network of 10 regional Bridge organisations which, from April 2012, were tasked with supporting the cultural sector and schools to work more effectively together.

Bridge organisations and museums working together
Birmingham Museum & Art Gallery

Birmingham Museum & Art Gallery launched the city's first 'mini museum' in autumn 2015 – a space for early years children and their families, filled with story books and cushions, not to mention a stuffed baby lynx, a book bench, an interactive mummy-jigsaw and brightly coloured stained glass windows.

The intention was to create a relaxed and comfortable space, where very young children and their carers can take time out of the bustle of the main galleries. The team leading the project worked closely with three local nurseries to pilot ideas, but they also drew on the expertise of colleagues at Arts Connect, the Bridge organisation for the West Midlands, who helped identify best practice in provision for this age group and encouraged them to engage in more meaningful dialogue with the early years sector as a whole.

Older siblings have not been forgotten, as the mini museum incorporates a computer game developed by a group of apprentices aged 16-19 at the LearnPlay Foundation, a local organisation which harnesses games and media-based technologies to social outcomes.

Feedback so far shows that children are genuinely interacting and feeling comfortable in the mini-museum and that it adds a welcome new dimension to the environment and atmosphere at Birmingham Museum & Art Gallery.

www.birminghammuseums.org.uk/bmag/highlights/mini-museum

The review of cultural education commissioned from Darren Henley by the Department for Culture, Media and Sport (DCMS) and the Department for Education (DfE) in 2012 and the plan that followed it in 2013 set out to enshrine the place of cultural learning in government policy.[11] The report underlined the complex nature of cultural education as a fusion of knowledge, skill and critical thinking, urged government to include a sixth grouping of cultural subjects in the new EBacc performance measure and argued strongly that design should be added to the so-called STEM (Science, Technology, Engineering and Mathematics) agenda. It advocated the creation of Cultural Education Partnerships to ensure local cooperation and economies of scale, and pressed Ofsted to make the importance of cultural education a more explicit aspect of its assessment process. An important section of the report also set out in some detail the minimum expectations for cultural education at the ages of seven, 11, 16 and 19.

Darren Henley's review of "cultural education"was widely welcomed for its clarity, inclusiveness and ambition. But some of those consulted for this research remain uneasy about the language of "cultural education", because it too often appears to imply an exclusive focus on schools. Museum learning, they point out, involves people of all ages and at all stages in life and schools are just one part of the wider community that museums serve.

10 Morris, Estelle, *Review of the Arts Council's Strategic Framework*, Arts Council England, April 2011 https://www.museumsassociation.org/download?id=358496

11 Henley, Darren, *Cultural Education in England*, Department for Culture, Media and Sport and Department for Education, 2012 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/260726/Cultural_Education_report.pdf;

Henley, Darren, *Cultural Education A summary of programmes and opportunities*, Department for Culture, Media and Sport and Department for Education, July 2013 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/226569/Cultural-Education.pdf

2. A changing landscape continued

In addition, learning with and through objects has its own pedagogy, based on observation, dialogue, evaluative thinking, empathy and sensory response. Clearly there are large areas of overlap with arts education and countless good examples of embedded arts-based learning in museums. However, learning in museums is not necessarily about mastering a creative skill and nor does it invariably involve aesthetic appreciation. Rather it is about how we use material evidence – in science, history, art and other disciplines – to understand and interpret the world in which we live. In the course of carrying out this review, it became clear that a sense of the distinctiveness of museum learning is deeply engrained in the traditions, training and professional identity of the workforce.

The disjuncture between museums and the world of cultural policy is frequently reinforced by the assumptions and definitions that underpin academic research on cultural value and the creative industries. The Warwick Commission's report on the future of cultural value, for example, mentions museums in passing, but devotes much more of its analysis to discussion of the arts.[12] Likewise, King's College London's recent "cultural enquiry" into arts policy and young people, 1944 to 2014 considers arts education on its own, with little reference to the parallel and often overlapping history of museum and gallery education.[13]

A further issue raised by those who work in museums of science, engineering and technology is how science fits in to the vocabulary and priorities of a development agency long accustomed to thinking and talking mainly about the arts. This is not to suggest that science and the arts exist in entirely separate spheres. Our survey uncovered many examples of museums converting STEM education into STEAM, by using artistic and design practices to explore mathematics and science, and it is encouraging to note that the Science Association has recently signed up as an Artsmark supporter. But many of those consulted for this review would nevertheless argue that the STEM agenda in museums and schools deserves investment on its own terms and that science requires more explicit acknowledgement in the formulation and application of cultural education policy.

STEAM learning in the museum
Derby Silk Mill

As the site of the world's first factory, Derby Silk Mill occupies a globally significant place in the history of innovation, creativity and engineering. It is currently working with 30 Year 9 students at Landau Forte College Derby, an Academy with dual specialisms in technology and business enterprise, on the UK ArtScience Prize – part of a larger international project aimed at bringing the worlds of art and science together.

Students use the resources of the museum to explore innovative art and design ideas informed by the leading edge of modern science. After a period of intensive research and development, a team is then selected to attend the annual Idea Translation Workshop at Le Laboratoire in Paris.

For the team at Derby Museums, participation in this project is a means of fulfilling their mission to change the way the city is understood and, in the process, to nurture the next generation of innovators, makers and creators.

It is significant in this respect that the museums service in Derby pursues many of its STEAM activities in tandem with Rolls Royce, one of the city's biggest employers, because the company is concerned about the dearth of suitably skilled mid-range technicians from the local area.

www.artscienceprize.org/uk

12 *Enriching Britain: Culture, Creativity and Growth, The 2015 Report by the Warwick Commission on the Future of Cultural Value*, The University of Warwick, 2015 http://www2.warwick.ac.uk/research/warwickcommission/futureculture/finalreport/warwick_commission_final_report.pdf

13 Doeser, James, *Step by step: arts policy and young people 1944-2014*, King's College London, January 2015 http://www.kcl.ac.uk/Cultural/culturalenquiries/youngpeople/Step-by-step.pdf

3. Educational reform

3.1 Structural change in schools

These debates about how to define and deliver cultural education have been conducted against a background of far-reaching educational reform. One of the first actions of the newly elected coalition government was to change the name of the Department for Children, Schools and Families to the Department for Education, a redesignation widely perceived at the time as signalling the government's reforming intentions.

In November 2010, The Importance of Teaching White Paper[14] laid out the case for a radical overhaul of the education system and foregrounded the role of teachers and teaching in bringing about an improvement in educational attainment. The main thrust of education policy was to offer schools and teachers greater autonomy, on the basis that it would give them the flexibility to innovate and drive up standards.

> 'At the heart of our plan is a vision of the teacher as our society's most valuable asset. We know that nothing matters more in improving education than giving every child access to the best possible teaching. There is no calling more noble, no profession more vital and no service more important than teaching. It is because we believe in the importance of teaching – as the means by which we liberate every child to become the adult they aspire to be – that this White Paper has been written. The importance of teaching cannot be over-stated. And that is why there is a fierce urgency to our plans for reform.'
>
> Department for Education, *The Importance of Teaching: the Schools White Paper*, 2010

The White Paper put in place most of the key measures that continue, in one form or another, to influence the organisation and behaviour of schools today, from the new EBacc performance measure to "pupil premium" funding for children from disadvantaged families. From 2010 onwards schools were encouraged to apply for "academy" status, with the extra funding and greater curricular freedoms this provides. There are now about 5,500 academies and free schools in England and the government aspires to put in place an all-academies system for the approximately 16,000 schools remaining in the maintained sector by 2022.[15] Eight Regional School Commissioners hold responsibility for monitoring the academy schools in their respective regions and overseeing the expansion of the programme.

Main features of *The Importance of Teaching: the Schools White Paper*, 2010

- A national network of teaching schools, based on the model of teaching hospitals
- A slimmed-down national curriculum with tighter specifications about the knowledge that every child should be expected to master
- A new EBacc performance measure with five so-called 'pillars' (English, maths, science, modern foreign languages and humanities history and geography)
- Reform of the Ofsted inspection so that inspectors spend more time in the classroom
- New 'floor standard' for primary and secondary schools (ie minimum level of performance)
- End to centralised target-setting and role of local authorities as improvement partner
- Introduction of pupil premium to follow the most deprived pupils
- Expansion of academies programme and creation of free schools

The consequence of these reforms is that schools are increasingly expected to work together, in chains, clusters, pyramids and alliances that reflect a syndicated model of educational provision. In this new educational landscape and with local authority advisory and improvement teams now greatly reduced, museums no longer have a single gateway or influential champion for the work they do with schools. As several people interviewed for this research observed, it can be hard to establish a relationship with the head of an academy chain, who is effectively the CEO of a business employing many hundreds of people, often over a large geographical area.

The challenge for museums and the wider cultural sector is to see where alliances and networks are developing,

14 *The Importance of Teaching: The Schools White Paper 2010,* Department for Education www.gov.uk/government/uploads/system/uploads/attachment_data/file/175429/CM-7980.pdf

15 *Educational Excellence Everywhere,* Department for Education, March 2016 www.gov.uk/government/uploads/system/uploads/attachment_data/file/508447/Educational_Excellence_Everywhere.pdf

3. Educational reform continued

so that they can maximise their influence on this constantly evolving ecology. In theory the freedom given to academy schools to design their own curriculum, albeit within existing accountability frameworks, may open up new opportunities for museums to develop more responsive, long-term and adventurous relationships with schools in their vicinity. Interesting models have already emerged, such as the pioneering Langley Academy in Slough. But the full implications of the "academisation" programme are not yet clear and there is much still to learn about its limitations and potential.

The first "museum school" in the UK
The Langley Academy, Slough

The Langley Academy in Slough is the only secondary school in England with an explicit focus on museum learning. Inspired by the New York City Museum School, it uses the resources of the cultural heritage sector to support a curriculum and ethos that embody a commitment to learning through curiosity, exploration and discovery.

The school employs museum specialists, who plan activities with a rigorous focus on pupil outcomes. An external Museums Advisory Group keeps the school up-to-date with the latest developments in museums, while a pupil-led Museum Council gives regular feedback about museum learning activities.

Professional development is a high priority for all staff. The Langley Academy also commissions and publishes research that gives museums and schools practical insights into how they can work more effectively together (see bibliography).

Feedback from students, teachers and parents, as well as external evaluation by the University of Bristol and King's College London, suggest that The Langley Academy is doing something novel, exciting and genuinely transformative. There is tangible evidence in many subject areas that learning through museums leads to increased pupil engagement, motivation and understanding.

The Langley Academy works with a group of four core partner museums: The River & Rowing Museum, the V&A, the Museum of English Rural Life and the Oxford University Museum of Natural History.

www.langleyacademy.org/strongertogether

3.2 "Life chances" and raising attainment

A key aspect of the political context in which museums operate is the government's commitment to increasing children's "life chances" through a rigorous but well-balanced education. Many of those interviewed for this review note the importance of understanding the discourse that surrounds social mobility and demonstrating how museums can play their part in supporting schools to promote it. If museums are to engage effectively with teachers and schools, then they must also recognise the policy expectations that determine educational priorities.

From the Wellcome Trust's *Review of Informal Science Learning* to the Sutton Trust's work on extra-curricular inequality, the evidence-base shows that social and economic disadvantage act as a barrier to learning beyond the home and that schools and other public institutions have an important part to play in correcting this imbalance.[16] In 2012 an All Party Parliamentary Group (APPG) on Social Mobility even went so far as to publish a *Character and Resilience Manifesto*, which proclaimed the importance of giving children and young people formative, character-building experiences that nurture their social and emotional skills – a theme taken up emphatically by the former Prime Minister in his recent life chances speech.[17]

The chief inspector of schools has signalled that geography is an additional factor in limiting horizons, raising the alarm about a widening north-south divide in educational attainment and warning that the government's ambitions to build a northern economic powerhouse would "splutter and die" without

16 Lloyd, R, Neilson, R, King, S, Dyball, M, *Science beyond the classroom: Review of Informal Science Learning*, Wellcome Trust, November 2012

Research Brief: Extra-curricular Inequality, The Sutton Trust, September 2014 http://www.suttontrust.com/wp-content/uploads/2014/09/Extracurricular-inequality.pdf

www.gov.uk/government/speeches/prime-ministers-speech-on-life-chances

17 Paterson, C, Tyler, C, Lexmond, J, *Character and Resilience Manifesto: The all-party parliamentary group on Social Mobility*, January 2014

http://www.educationengland.org.uk/documents/pdfs/2014-appg-social-mobility.pdf

3. Educational reform

investment and concerted action to tackle the problem.[18] He has also repeatedly drawn attention to the problems faced by coastal towns, where weak transport links and fading local economies have lowered educational opportunity and expectation.[19]

Raising attainment in literacy in a coastal town
Time and Tide Museum, Great Yarmouth, in partnership with the National Maritime Museum

The Time and Tide Museum is a maritime and social history museum in a former fish smoking factory, run by Norfolk Museums Service and located in an area of socio-economic deprivation with lower than average levels of educational attainment and cultural engagement. With its large and transient migrant population, Great Yarmouth also has large numbers of students for whom English is a second language.

Through a programme called Stories from the Sea, the museum set out to support literacy as well as history. A series of "writers in residence" worked with museum staff and teachers to create three new events with exciting themes and engaging characters: Pirates, Explorers and Shipwrecks. A high-quality digital toolkit provided additional inspiration and support materials for classroom teaching.

Teachers report that children are now writing more confidently and creatively and that the positive impact on boys is particularly noticeable. By working closely with 13 local "core" schools the museum has developed a network of champions who are now more inclined to make repeat visits. The emphasis on attainment in literacy also proved a strong attraction for headteachers.

Stories from the Sea is part of the DfE-funded Museums and Schools programme.

This growing body of evidence, together with the eloquent testimony and advocacy of influential figures in the academy sector and leading independent schools, should give headteachers a licence to promote cultural learning.[20] There are strong indications, too, that Ofsted inspectors recognise the value of a rich cultural education. A recent linguistic analysis of 1,999 Ofsted inspection reports for primary and secondary maintained schools and academies in England published between September 2014 and January 2015 found that inspection reports for primary schools graded "outstanding" or "good" were more likely to reference arts and cultural education than reports for primary schools graded "requires improvement" or "inadequate".[21]

'Beyond the classroom, schools should seek to envelop students in rich cultural experiences. For more affluent children, trips to the theatre, national parks, galleries and museums are an integral part of growing up, yet in London I've taught teenagers who have barely left their postcode.

At Burlington Danes we introduced Cultural Capital – a programme of cultural visits to attractions around London. The culture of high stakes accountability in which schools operate can deter head teachers from investing time and money in anything which doesn't directly improve students' grades.

But if we're serious about preparing our students for top universities we must develop a cultural curriculum every bit as enriching as the classroom curriculum.'

Dame Sally Coates, former head of Burlington Danes Academy, now director of Southern Academies at United Learning

www.telegraph.co.uk/education/educationopinion/11418125/More-must-be-done-to-help-state-pupils-into-Oxbridge.html

18 https://www.gov.uk/government/speeches/sir-michael-wilshaw-speech-at-ippr

19 https://www.gov.uk/government/news/too-many-of-englands-poorest-let-down-by-education-system

20 See for example interviews with the headteachers of five leading independent schools carried out by the Cultural Learning Alliance: http://www.culturallearningalliance.org.uk/images/uploads/CLA_Headteachers_inteviews_report.pdf

21 *Arts and Cultural Education in School Inspection Reports*, SQW, Arts Council England, 2015 (unpublished) http://www.sqw.co.uk/about-us/latest-news1/are-good-schools-associated-with-high-quality-provision-in-particular-subjects/

3. Educational reform continued

Yet research commissioned by the National Union of Teachers suggests that accountability measures and pressure to raise attainment have the perverse effect of discouraging creative teaching strategies where they are arguably needed most. It finds that the amount of time spent on creative teaching, investigation, play and practical work has diminished considerably and that lessons increasingly follow a standard format. The report concludes that high-stakes testing and teachers' perceptions of Ofsted's requirements are making it harder for schools to offer their pupils memorable experiences both inside and outside the classroom.[22]

One of the main levers for raising educational attainment is pupil premium, which was introduced by the coalition government in 2010 as a means of closing the gap between disadvantaged pupils and their peers. Research undertaken by the Sutton Trust into how schools are using pupil premium indicates that numeracy, literacy and transition from primary to secondary school are the most pressing areas of concern.[23] Moreover, headteachers are strongly encouraged to base their decisions about how to deploy pupil premium on the evidence provided by the Education Endowment Foundation (EEF), which has summarised over 10,000 pieces of relevant educational research in order to grade interventions on a scale that calibrates cost, strength of evidence and learning impact. Thus the impact of arts participation on academic learning is judged to be "positive but low" – hardly an unequivocal endorsement for the value of cultural education.[24]

Our consultation indicates that museums are committed to supporting schools in raising attainment, but recognise the difficulties involved in demonstrating a conclusive correlation between museum learning and academic progress. The recently published report about the AHRC's three-year Cultural Value Project examines this issue at some length and concludes that the evidence for a link with improved attainment is difficult to prove. On the other hand, the report's authors point to a substantial body of research which shows how "arts education" (their terminology) has a beneficial impact on the factors that underpin learning, such as cognitive ability, confidence, motivation, problem-solving and communication skills. In other words, cultural education helps build "the crucial platform" for individual learning and development.[25]

It is highly significant in this respect that the Department for Culture, Media and Sport's own recent White Paper cites "a range of data showing a clear relationship between culture and educational attainment" and states that government will actively encourage schools to use pupil premium as a mechanism for widening access to cultural education.[26] Two of the winning schools in this year's Pupil Premium Awards were commended specifically for their commitment to involving their pupils in arts and heritage activities. This is – or should be – very good news for the future of formal learning in museums.[27]

22 Hutchings, Merryn, *Exam Factories? The impact of accountability measures on children and young people*, National Union of Teachers, June 2015 https://www.teachers.org.uk/files/exam-factories.pdf

23 *Premium Policies: What schools and teachers believe will improve standards for poorer pupils and those in low-attaining schools*, The Sutton Trust, January 2012 http://www.suttontrust.com/wp-content/uploads/2012/01/1suttontrustbcgeefreport.pdf

24 https://educationendowmentfoundation.org.uk/evidence/teaching-learning-toolkit/arts-participation/

25 Crossick, G, Kaszynska, P, Understanding the value of arts and culture: The AHRC Cultural Value Project, AHRC, March 2016, page 118 www.ahrc.ac.uk/documents/publications/cultural-value-project-final-report

26 The Culture White Paper, Department for Culture, Media and Sport, March 2016, page 15 www.gov.uk/government/uploads/system/uploads/attachment_data/file/510798/DCMS_The_Culture_White_Paper__3_.pdf

27 www.gov.uk/government/news/schools-tackling-disadvantage-celebrated-at-pupil-premium-awards

3. Educational reform

3.3 Initial teacher training and professional development for teachers

Many museums aspire to create a continuum of professional development opportunities for the teaching profession, from trainee teachers starting out on their career to well-established teachers keen to refresh their repertoire of skills. At least half the respondents to our survey offer some form of regular training for teachers and roughly one in five have links with teacher training providers. The fast-changing ecology of teacher training nevertheless presents something of a challenge for museums.

In keeping with its vision of a "teacher-led" educational renaissance, government now allows any school judged "outstanding" by Ofsted the right to apply to become a "teaching school". Official statistics show that school-led teacher training has expanded to the point where it now represents 51 per cent of the total (compared with the remaining 49 per cent in higher education institutions).[28] Unfortunately for museums, placements in settings outside the classroom no longer count for accreditation purposes, which means there is no incentive – beyond personal interest – to take them up.

A review of initial teacher training (ITT) commissioned from the prominent headteacher Sir Andrew Carter in 2015 proposed a number of modifications to this system, including the development of a more explicit framework for the core content of ITT. He also placed a welcome emphasis on deep subject knowledge and ongoing professional development. But there was no acknowledgement in his report of the potential of external cultural partnerships and alternative settings in extending teachers' skills and opening up new pedagogical approaches.[29]

Plans are underway to establish a new College of Teaching, which will take forward the professional development agenda for teachers in the next few years. In the meantime, many museums continue to foster links with university postgraduate certificate in education courses and some are finding creative ways of working with teaching school alliances to interweave ITT with ongoing professional development for more experienced teachers.

However, to exert any influence in this complex landscape, seasoned observers in the Bridge organisations suggest that it is more effective for museums to act as part of a larger cultural consortium than on their own. Artswork, the Bridge organisation for the South East, has developed an investment programme for Teaching School Alliances which invites them to work with local museums, libraries, arts and heritage organisations and incorporates support for teachers who are Specialist Leaders in Education (SLEs).[30] It is a model that taps into the enthusiasm of teachers who can influence the culture of their school from within and demonstrates the value of sharing advocacy and resources within a broader cultural partnership. In principle, the advent of the Local Cultural Education Partnerships (LCEPs) which Arts Council England announced in autumn 2015, following successful pilots in Bristol, Barking & Dagenham and Great Yarmouth, will provide a catalyst for further collaboration along these lines.[31]

28 Initial teacher training census for the academic year 2015 to 2016, England, Department for Education, 19 November 2015 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/478098/ITT_CENSUS_SFR_46_2015_to_2016.pdf

29 Carter, Andrew, *Carter Review of Initial Teacher Training (ITT)*, Department for Education, January 2015 www.gov.uk/government/uploads/system/uploads/attachment_data/file/399957/Carter_Review.pdf

30 www.artswork.org.uk/wp-content/uploads/Teaching-Schools-Call-16-18-Criteria.pdf

31 www.artscouncil.org.uk/children-and-young-people/cultural-education-challenge

3. Educational reform continued

Training in prehistory for primary school teachers
Museum of London

In common with many other museums, the Museum of London quickly realised that it could help primary school teachers struggling with the new national curriculum subject of prehistory. With funding from the London Schools Excellence Fund and guidance from two lead teachers, the museum team designed a training programme for history subject coordinators, which it then extended to all teachers in two teaching school alliances in east London. The programme has subsequently been rolled out to schools London-wide.

The programme used the museum's "London before London" gallery and its handling collection to create a timeline from the Palaeolithic period through to the Iron Age. Teachers particularly liked the combination of a curator and teacher jointly leading sessions. By the end of the training, teachers recorded an increase in confidence and 95 per cent of participants rated the training as excellent.

Altogether, the programme has trained over 400 teachers and ITT students. It has also had some unexpected outcomes, including the creation of excellent online resources and prehistoric loan boxes which the museum is delivering in collaboration with the London schools library service.

4. What is the current offer of formal learning delivered by museums?

4.1 Service levels and priorities

Our research reveals a sector that is adapting constructively, if not always painlessly, to change. Compared with the situation a generation ago in the early 1990s, museums are offering a responsive and well-rounded service for schools and know what they would like to do or should be doing, even if they don't always have the capacity to do it. Most offer facilitated and/or self-directed visits, generic risk assessments, outreach sessions and learning resources; approximately half offer loan collections and professional development for teachers.

Survey findings: resources and services offered

96% offer facilitated visits

83% offer self-directed visits

77% offer generic risk assessments

71% offer outreach sessions

67% offer learning resources

54% offer professional development for teachers

50% offer loan collections

Smaller museums, run entirely by volunteers, often lack the capacity to offer a service for schools. But many are nonetheless eager to develop a formal learning programme and would welcome more training and support in learning how to go about it. Some parts of the country are finding inventive solutions to this challenge, for example the National Maritime Museum Cornwall's Cornish Voices outreach programme, delivered through the Cornwall Museums Partnership, which uses local authors, actors and volunteers to help small museums engage with their local schools and communities in ways they couldn't achieve on their own.

In general the response to our survey and focus group discussions has been upbeat, despite inevitable tales of fire-fighting in the face of cuts and curriculum change, and some museum educators reporting that they are now being asked to do "more for less". On the whole, respondents confirm that formal learning is highly valued by leadership teams and viewed as integral to the organisation's mission, with many museums explicitly incorporating a notion of cultural entitlement into their forward plans.[32]

Survey findings: priority attached to formal learning

37% say the priority given to formal learning has increased in the last three years

50% say the priority given to formal learning has stayed the same in the last three years

11% say the priority given to formal learning has decreased in the last three years

The priority given to formal learning in the last three years has increased among 37 per cent of respondents to our survey. Anecdotally, it would seem that this is often as a result of external investment, for example from the Arts Council or Heritage Lottery Fund (HLF), or for the more pragmatic reason that schools represent a stable audience at a time when other community groups are dwindling or closing. Many respondents gratefully acknowledge the impact of HLF funding in transforming not just educational ambition and know-how, but also the physical space available for learning. However, some are also worried about how they will sustain the legacy of time-limited investment in a difficult economic climate.

> Our capacity for formal education has recently increased with a new fixed term HLF-funded post to support development of a heritage hub and access to a range of heritage resources locally.
>
> *Local authority museum, London*

> We have moved from HLF funding as part of our capital development to raising all our own income [for learning] and it is tough-going.
>
> *Independent industrial museum, West Midlands*

32 For example Norfolk Museums want every child in Norfolk to have used their service at least once by their 16th birthday; the William Morris Gallery in Walthamstow is committed to ensuring that every school in Waltham Forest experiences its collection and education programmes; and the Museum of London has as one of its five strategic objectives a commitment to engaging every school child in London.

4. What is the current offer of formal learning delivered by museums? continued

Asked about the balance between formal and informal learning, slightly more museums report a shift towards formal learning than away from it. Some museum educators suggest that other agendas and their associated sources of funding, especially in the health and wellbeing arena, present more promising opportunities for growth, pointing out that trusts, foundations and public sector commissioners are disinclined to put money directly into statutory services such as schools. By the same token, many museums now see formal education as an income stream and are giving it more priority for that reason.

Survey findings: shift towards or away from formal learning

22% say there has been a shift towards formal learning in the last three years

51% say the balance has stayed the same

19% say there has been a shift away from formal learning in the last three years

4.2 Take-up of services by schools

Overall, the take-up by schools of formal learning provision in museums appears buoyant. Some larger museum services report an impressive volume of school visits: Birmingham Museums Trust works with more than 121,000 school-age children a year, more than any other arts organisation in the city; Norfolk Museums attract 20,000 children annually in early years education alone; and in Brighton some 85 per cent of local schools use the city's museums.

On the "demand" side, the DCMS Taking Part survey, now in its eleventh year, audits engagement with the cultural sector over time and shows that overall visitor numbers at museums and galleries have grown by 10 percentage points since 2005/06. The latest results show that 62.2 per cent of children (ages 5-15) had visited a museum or gallery in the last 12 months, either in or out of school – a similar proportion to 2008/09 and 2013/14. The survey is drawn from interviews with households and has gradually broadened its scope to include children aged 5-15. However, it is important to note that the data it collects for children aged 5-10 is limited to activities out of school.[33]

Survey findings: volume of school visits

49% say that visits by school groups have increased in the last three years

(45% in the North and Midlands; 55% in the South)

26% say that visits by school groups have stayed the same in the last three years

(28% in the North and Midlands; 24% in the South)

23% say that visits by school groups have decreased in the last three years

(27% in the North and Midlands; 17% in the South)

This pattern is corroborated by our survey, which finds that 49 per cent of respondents record an overall increase in school visits in the last three years. In the absence of comparative historical data or a detailed breakdown of new versus repeat users, it is difficult to trace a statistical trajectory and account for this positive picture with certainty. Comments gathered through our survey also suggest that the general upward trend masks a sharp decrease in school visits in some places and lingering uncertainty about how to negotiate the new educational landscape. It is evident, too, that museums in the North and Midlands are witnessing smaller increases – a symptom, perhaps, of the local authority cuts that have hit civic museums particularly hard.

> We are about to write the brief and engage a consultant to help us revitalise our learning delivery – despite success and growth in all other areas of the museum, we are struggling with declining income and dropping education figures (over 9,000 in 2010 to less than 4,000 in 2015). This is partly about the museum's own focus and investment, but also about the changing nature of what schools want from formal education in museums.
>
> *Independent social history museum, West Midlands*

Museums responding to our survey report that schools are visiting with larger pupil groups, on the basis of a "value for money" calculation about the cost and effort of organising the trip, and that many are leaning towards outreach as a more convenient option. For some teachers, the administration associated with taking pupils out (securing parental permission, risk assessments, arranging cover etc.) is becoming too arduous to contemplate.

33 Taking Part statistical releases, Department for Culture, Media and Sport: www.gov.uk/government/collections/sat--2

4. What is the current offer of formal learning delivered by museums? continued

> Teachers indicate that it is harder to get time off the curriculum for visits. We have found that lots of schools are interested in outreach visits, as this cuts down the administration for them.
>
> *Independent social history museum, London*

On a contrasting note, many museums report an increase in the number of early years and special educational needs providers using their services, perhaps because these schools have more flexibility than their mainstream counterparts in how they organise the curriculum and school day. In London the National Gallery and Museum of London are lead participants in a practitioner network aimed at sharing good practice in work with special education, and our survey provided many examples of museums giving considerable thought to how they can increase access, comfort and enjoyment for disabled people, by preparing carefully for visits in advance and offering alternative methods of interpretation.

> We have made our displays accessible to those with a communication difficulty with the use of Makaton symbols, accessible for visually impaired with the use of the Talking Pen, and are in the process of putting an explanation of the museum on an iPad for use by anyone who may have a comprehension difficulty.
>
> *Independent social history museum, South West*

Teachers in our focus groups emphasised the importance of highlighting special needs provision in marketing materials and praised museums that go to extra lengths in accommodating children and young people with specific access requirements. With the latest DfE statistical release indicating that 15.4 per cent of all pupils in schools in England have special educational needs, this is a significant audience for museums.[34] Support agencies consulted for our review suggest that museums, with their inherently stimulating and multi-sensory environment, have much to offer special education. But they also ask whether museums could go further in tailoring activities for children and young people with special educational needs and ensuring that teachers understand how flexible museum education can be.

Survey findings: special educational needs and disability (SEND)

6% say that SEND groups represent a large proportion of educational visits

61% say that SEND groups represent a small proportion of educational visits

26% say they receive hardly any visits from SEND groups

Welcoming people with autism
Royal Air Force Museum

The Royal Air Force Museum is the first museum in the country to receive an award from the National Autistic Society for its efforts in creating a comfortable environment for people with autism.

Museums can be frightening for anyone living with autism, because they are often busy environments with sensory overload and large crowds of people. In consultation with the National Autistic Society, the museum's Access and Learning Team introduced a dedicated section for autism on the accessibility page of the museum's website and a downloadable autism-friendly trail.

Onsite developments include a quiet room within the main museum hall and clearer signage. The museum has also committed to delivering an autism-awareness training programme for public-facing staff as well as volunteers. Certain staff will be nominated as Autism Champions.

By making these small but thoughtful adjustments, the museum has made itself welcoming to people with autism and their families.

www.rafmuseum.org.uk/london/things-to-see-and-do/autism.aspx

34 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/447917/SFR25-2015_Text.pdf

4. What is the current offer of formal learning delivered by museums? continued

To anyone with a longstanding knowledge of museum education, it will come as no surprise to learn that the vast majority of museum visits are still made by primary schools and that 19 per cent of survey respondents have seen a further shift towards primary education in the last three years. From our consultation with teachers and museum educators, it would seem that secondary schools are finding it harder than ever to dedicate time and money to activity that could be deemed surplus to core curriculum requirements. In turn, many museums are inclined to prioritise primary education in the interests of maintaining visitor numbers and maximising income.

Survey findings: balance between primary and secondary visits

42% say primary schools represent "all or nearly all" school visits

55% say primary schools represent a "large proportion" of school visits

2% say primary schools represent a "small proportion" of school visits

0% say they receive "hardly any" primary school visits

1% say secondary schools represent "all or nearly all" school visits

19% say secondary schools represent a "large proportion" of school visits

51% say secondary schools represent a "small proportion" of school visits

25% say they receive "hardly any" secondary school visits

Respondents to our survey report that secondary schools increasingly seek out activities geared towards deepening subject knowledge and preparing young people for the world of further study and work. For example, Blandford Museum in Dorset runs a Young Volunteers programme that brings secondary school students into the museum to work on projects with museum staff. The benefits are two-way, with the young people gaining experiences they can talk about in their CVs and UCAS applications and the museum learning from the students' grasp of design and digital technology. In a similar vein, the National Maritime Museum in Greenwich runs a successful skills and careers development programme for young people entitled Your Future in Place, which gives participants opportunities for work experience and volunteering in school and during holidays.

> Key Stage 3 and above are struggling and tend to come in small, specific subject groups, e.g., ICT, science, leisure and tourism, art and design.
>
> *Independent social history museum, East Midlands*
>
> Secondary schools at Key Stage 4 are not engaging with museums as they used to. They are now focusing on STEM subjects in the classroom, making it more difficult for teachers to take their pupils out of the classroom for non-core learning.
>
> *Local authority museum, London*
>
> Trips are getting harder and harder to organise and justify.
>
> *Secondary school teacher*

Taken as a whole, however, our research suggests that museums are losing traction with secondary schools and are unsure how they can break the cycle of decline, given the apparent rigidity of the secondary curriculum and examination régime. The teachers in our secondary school focus group suggest that the solution lies in long-term programmes of activity, supported by experts in their field (artists, scientists, writers, historians, etc). They are interested in experiences that promote "life skills" and employability, including competitions and opportunities to exhibit and celebrate their pupils' work. But with funding and other pressures mounting in both museums and schools, there is clearly some way to go in brokering a robust and genuinely reciprocal relationship with secondary education.

4. What is the current offer of formal learning delivered by museums? continued

Linking young people with the creative industries
Victoria and Albert Museum

DesignLab is a programme that pioneers new ways of engaging secondary students in state schools and colleges with design, encouraging them to use exhibitions and displays at the V&A as a stimulus for their creativity and introducing them to the professional world of the creative industries.

Students working with the recent exhibition *Alexander McQueen: Savage Beauty* enjoyed first-hand tuition from professional fashion designers and used neighbouring collections at the Natural History Museum to investigate how natural forms and motifs can inspire the design of clothes.

In another recent DesignLab project, students from a school in Hereford visited the studio of well-known designer Thomas Heatherwick and used the V&A's collections to develop their own interdisciplinary response to a design brief.

Teachers report that the project has reinvigorated their own teaching, transformed students' understanding of materials and processes and given them a new insight into careers that might otherwise have seemed beyond their reach.

www.vam.ac.uk/content/articles/d/designlab/index.html

4.3 A new curriculum

Structural reform in the education sector has been matched by sweeping changes to the curriculum itself. After due consultation, the new national curriculum was introduced in stages and took full effect in September 2015. In general the new curriculum places more emphasis on closely defined bodies of academic knowledge and higher attainment at an earlier age.[35] New grading scales and examination arrangements have been introduced for GCSEs, which means that more is now at stake in end-of-year exams. From September 2016, secondary schools will use the new "Progress 8" and "Attainment 8" accountability measures to track individual pupil progress across a suite of eight subjects.[36]

For museums the most significant change has been to the history curriculum, which is now taught in chronological order from prehistory to the present-day. At the time of its introduction the Historical Association, Museums Association and many individual museums expressed concern about the daunting unfamiliarity of the topics teachers would now have to teach, especially in primary schools.

It is clear from our survey that many museums initially feared the sudden redundancy of well-established and popular programmes relating to the Tudors, Victorians and the Second World War. How, for example, would a museum dedicated to 20th century military tanks re-package its offer for an all-important primary school audience now grappling with stone-age man? The "universal" museum at least has the luxury of broadly-based collections that can be deployed in support of new curricular demands. Single-focus museums, by contrast, have had to think on their feet – and fast.

> In our case, the changed primary national curriculum for history has led to a decrease in the number of schools visiting the museum, as the history that we are able to offer only dates back to the 18th century. Previously we were able to offer sessions directly related to the Victorians and Britain in the 1940s, and to the Industrial Revolution for secondary schools. We now place emphasis on the local history element of the history curriculum, but even so have seen a marked decrease in the number of schools accessing our learning provision.
>
> *Independent social history museum, South West*

But although many museums noticed an immediate drop in business, they largely report that school visits are picking up again. Familiar activities have often been re-badged as "literacy" or "local studies" and museums have been exceptionally fleet-of-foot in spotting new opportunities, for example to support primary teachers with teaching prehistory or evolution. Far from flagging, museums report that demand is actually increasing in history and science and, to a lesser extent, in English and art.

35 www.gov.uk/government/news/new-curriculum-will-make-education-system-envy-of-the-world

36 www.gov.uk/government/uploads/system/uploads/attachment_data/file/285990/P8_factsheet.pdf

4. What is the current offer of formal learning delivered by museums? continued

Survey findings: increases in curriculum demand

35% report increased curriculum demand in history

21% report increased curriculum demand in science

14% report increased curriculum demand in English (including literacy)

11% report increased curriculum demand in art

Whole school priorities have focused on the new curriculum, particularly English and maths. This has sadly pushed out the arts and humanities. I'm hoping to see a reversal in this trend though! Budgets (or lack of) have resulted in less visits being undertaken, sadly. Again, I'm hoping to see an improvement in this and better forward planning in my school.

Primary teacher, Leeds

Supporting new curriculum topics in the primary classroom
Oxford University Museum of Natural History

Oxford's Museum of Natural History has been a hotbed of evolutionary research and education since the first public debate of Darwin's On the Origin of Species took place there in 1860. After a new draft national curriculum was published in 2012, it was clear that primary teachers were worried about how to teach the new subject of evolution.

The museum responded by developing a comprehensive package of programmes and resources, Evolution Solutions, including a CPD day for primary teachers (in partnership with the education departments at Oxford University and Oxford Brookes University) and new evolution sessions for primary groups.

Through close observation and handling of specimens, children explore how animals have evolved to adapt to survive in their particular habitats. They get the chance to touch real specimens, from elephant teeth and polar bear paws to huge python skins and gliding lizards.

Alongside classroom resources, the museum has also developed an app that uses iBeacons to take students on a treasure hunt style trail exploring evolution in the museum. New touchable displays, developed to introduce evolution, offer a particular emphasis on sensory learning and access for visually impaired visitors.

www.oum.ox.ac.uk/educate/teachers.htm

Our consultation with teachers suggests that a further area of particular concern is spiritual, moral, social and cultural (SMSC) education, where they are often uncertain how to interpret the government's "Prevent" agenda and promote understanding of "British values" – defined by Ofsted as "democracy; the rule of law, individual liberty and mutual respect for and tolerance of those with different faiths and beliefs and for those without faith". Several stakeholders in the cultural sector consulted for this review see this as an agenda that museums urgently need to grasp, since it plays to their strengths as places where ideas, histories and cultures collide and different points of view can be accommodated.

4. What is the current offer of formal learning delivered by museums? continued

Here museums with collections that relate to cultural identity, religious faith and the legal system are already doing good work: Bradford Museums and Galleries use artwork and artefacts to explore how early Islamic trade, materials and ideas influenced world culture; Manchester's Jewish Museum, in the city's oldest synagogue, addresses the Holocaust through the testimony of survivors and introduces children and young people to the Jewish experience in Manchester through objects, images, film and sensory activities; and the National Centre for Citizenship and the Law (NCCL) delivers education programmes in heritage sites across the UK that encourage young people to become responsible citizens, through object-based enquiry, debate and study days.

Among the subjects that are immediately relevant to museums, the biggest casualty of curriculum reform appears to have been art and design education. Research recently published by the National Society for Education in Art and Design (NSEAD) paints a picture of workforce demoralisation and diminishing curriculum time, and finds that 82 per cent of art and design teachers in independent schools support the principle of visiting museums and galleries compared with only 48 per cent of teachers in all other sectors combined.[37] Responses to our survey indicate that some galleries and museums with galleries find they are being asked to step into the breach by teachers desperate to compensate for shortcomings in provision for art and design in school. Others have noticed a falling-off in art-related visits and feel they can do little to reverse the ebbing tide.

> More and more [schools] are wanting a literacy and history theme, with fewer schools taking part in art-related activities.
>
> *Historic house, East Midlands*
>
> [There's] less art in schools – more demand for art in museums.
>
> *Gallery and exhibition venue, London*

4.4 Arts Award and Artsmark

Responses to our survey reveal that many museums have embraced Arts Award and Artsmark both as supporters and training centres. Some use the Takeover Days pioneered by Kids in Museums as an opportunity to give children and young people a platform for activities linked to Artsmark and Arts Award. And it is clear that museums often work hard to tailor an Arts Award programme or activity to suit the needs of individual schools. So, for example, Tullie House Museum and Art Gallery in Carlisle has helped four local schools set up a "mini museum" in their classroom, based on a chosen history topic and backed up by outreach sessions, a visit to the museum and object loans. The pupils will achieve a Discover Arts Award as part of the process.

> We have five trained Arts Award advisors in the learning team and offer Discover and Explore workshops and are planning an Arts Award after-school club and an Arts Award element to our summer young people festival in June.
>
> *University museum, North West*

37 *The National Society for Education in Art and Design Survey Report 2015-16*, NSEAD, 9 February 2016 www.nsead.org/downloads/survey.pdf

4. What is the current offer of formal learning delivered by museums? continued

Arts Award Takeover Day
Penlee House Gallery & Museum, Penzance

Penlee House is a Cornish public gallery which specialises in the Newlyn School artists (c.1880-1940) and holds collections relating to West Cornwall's archaeology and social history.

In 2013, for the first time ever, Penlee House supported Arts Award students from Mounts Bay Academy, Penzance, with the help of an Arts Award Coordinator who was funded by Arts Council England to work across the Cornwall Museums Partnership.

As part of Museum Takeover Day, a national initiative run by Kids in Museums, a combination of Bronze and Silver level students created poetry and dance pieces inspired by the gallery's exhibition on the artist Graham Sutherland. The Silver level students organised a 1940s themed evening to showcase this work, which was performed alongside 1940s songs and music to an audience of 100 family, friends and members of the general public. Within the galleries a Gold Arts Award student exhibited a film they had produced.

The gallery is now signed up as an Arts Award Supporter and promotes opportunities to other groups and schools, using this event as a model. Mounts Bay Academy has returned annually to run similar events with their Arts Award students, using the gallery as a venue and its collections and exhibitions as a stimulus. The experience has helped the gallery attract a new teenage audience and deepen its links with the local community.

www.swfed.org.uk/wp-content/uploads/2014/02/Case_study_Kids_in_Museums_Arts_Award_Penlee_House.pdf

Survey findings: involvement with Arts Award and Artsmark

36% are registered as an Arts Award Supporter

23% are an active Arts Award Centre

6% are registered as an Artsmark Supporter

23% support these schemes in other ways

39% are not involved with either of these schemes

As the agencies charged with supporting the delivery of Arts Award and Artsmark, Bridge organisations point out that schools like the clarity and structure of these schemes, as well as the reassurance and benefits of accreditation. But they note that participation in Arts Award and Artsmark is not without its challenges for museums. Above all, museums sometimes struggle to afford or recoup the time and financial outlay associated with training and delivery. Many build the costs of offering Arts Award into external funding bids for one-off programmes of activity and cannot always keep delivery going once the funding ends. Several Bridge organisations also express the view that museums would benefit from a coordinated promotional campaign to explain to schools the learning opportunities offered by the powerful combination of their expertise, buildings and collections.

> Turn Arts Award into Culture Award and stop talking about art and artists.
>
> *Local authority museum, South East*

For their part, not all museum educators consider Artsmark and Arts Award appropriate to the formal learning provision offered by their museum. We spoke to some who voiced misgivings about what they perceive to be the limited appeal of these schemes compared with museums' own educational programmes, which mobilise much larger cohorts of children and young people in opportunities for learning. They are also put off by a language which they feel focuses unduly on art and artists, and doesn't correspond with the collections and experiences their museum can offer.

4. What is the current offer of formal learning delivered by museums? continued

Recommendation

1. Adapting and innovating to strengthen formal learning in museums

Museums are uniquely placed to support a wide range of curriculum subjects and cross-curricular learning at every stage of education. But they must adapt and innovate if they are to respond constructively to different kinds of educational need (eg in early years or SEND education), as well as areas of curriculum growth (history, science, English, SMSC) or deficit (art and design, design and technology). This depends on effective communication with schools, the right strategic relationships and genuine partnership with teachers.

Senior leadership within museums, together with the agencies that support museums to work with schools, must champion the role that museums can play in our education system and give the workforce the means (information, CPD, exemplars, funding) of creating a more flexible and collaborative offer. Support should be particularly targeted at small to medium-sized museums.

Recommendation

2. Mobilising secondary schools to use museum collections and expertise

Secondary schools are finding it harder than ever to take advantage of the inspiring collections and specialist expertise held by museums. Yet experience shows that, at their best, museums can contribute positively to students' progress in many curriculum areas and support their thinking about further study and future careers.

The issue of how secondary schools use museums should be addressed nationally through research, training and pilot initiatives that take inspiration from successful models such as The Langley Academy, and by high-level advocacy to leadership bodies in the education sector (eg Ofsted and the new College of Teaching).

5. How do museums and schools assess the quality and impact of the offer?

5.1 Dimensions of a good learning experience

Part of the brief for this research was to investigate how museums and schools understand and measure the quality of museum learning. Through our survey and focus group discussions we asked teachers what they value in a museum visit and asked museum educators what they prioritise in planning and delivering their services for schools.

In a sector that ranges from the largest national museum catering for armies of school children to community museums with a tiny budget and volunteer workforce, the capacity to meet the needs of schools clearly varies a good deal. But a consistent theme in responses by museums to our consultation was the need for dialogue, flexibility and close encounters with real objects, supported by people who can offer first-hand, expert knowledge of their subject. Across the board, museums also suggest that teachers are more than ever attuned to cross-curricular learning and keen to seek out experiences that closely match their curricular requirements.

> [Schools' requirements] seem more likely to be topic-based, so they want a truly cross-curricular approach. However, they are equally as likely to say "I want to solve my literacy/cultural issues, what can you do?" And that's then down to the skill of our professionals to answer that.
>
> *Local authority museum service, Yorkshire and the Humber*

Teachers confirm that they want to explore broad topics, with plenty of curriculum links, and respond positively to materials that spell out curriculum benefits and learning objectives in direct, straightforward language that anyone can immediately understand, backed up by enthusiastic testimonials from other users. Apart from anything else, such evidence helps them make the internal case for taking children and young people out of school.

> [I look for] engagement and enjoyment of the children, links with the national curriculum, experiences/ knowledge we cannot duplicate in school with our own resources, novelty of the session, hands-on experiences.
>
> *Primary school teacher, Leeds*

> [I value] student enthusiasm and work made as a result [of a museum visit]. Also enthusiasm of museum staff to help plan and conduct the perfect tailor-made visit. Student engagement should continue at school.
>
> *Secondary art teacher, London*

However, teachers are also clear that learning in museums should not be limited by the curriculum. Participants in our focus groups valued outcomes that have little to do with the standard terminology of educational assessment. They want learning in museums to be different from classroom lessons – less didactic, more experiential and by a long way more interactive. They talk about excitement, inspiration, enjoyment and even happiness as potential outcomes. They understand the vital link between motivation and attainment and are confident about using museums for that reason. They regard museums as a source of inspiration and excitement, as places where children learn, as one teacher put it, by stealth or "undercover".

Secondary teachers, in particular, look to museums for experiences that sharpen critical thinking and offer pupils contact with an expert or an opportunity to apply knowledge in a "real world" setting. They expect to encounter knowledgeable and skilled staff, whose expertise can complement their own. The role of the museum as a repository of authoritative knowledge remains extremely important to them. This tallies with the experience of many museums, who report that schools have become more discriminating in their requirements: gone are the days when a trip to the local museum was simply a fun day out. Although fun may remain an important ingredient, schools also want bespoke experiences that contextualise knowledge, increase motivation and, at secondary level at any rate, have a bearing on their students' career aspirations.

> We have become much better at utilising all aspects of our collection (art, buildings, archives and museum objects) to provide variety and stimulus during visits.
>
> *Independent museum trust, North East*

> Schools are working harder and harder to cover more areas of the curriculum with one visit to the gallery or workshop. We as a result have to be even more reactive and very flexible in our approach.
>
> *Local authority museum, North West*

5. How do museums and schools assess the quality and impact of the offer? continued

5.2 Planning, measurement, evaluation and research

The language and business of evaluation and measurement have become increasingly important to museums in the last 20 years, both as a tool for self-improvement and in order to comply with the culture of evidence-based policy-making and investment that prevails in public sector organisations.[38]

This is not an easy subject to address, because the terminology associated with it – "evaluation", "research", "assessment", "measurement", "impact", "outcomes", "learning", "progression", "attainment" – is used and interpreted inconsistently across the sector. There are perennial questions about the reliability of self-reported testimony, which forms the basis of much evaluation in museums and mostly relates to the one-off experience. And museums have never reached a settled view about where the emphasis of measurement should lie: on how people learn or what they learn?

The challenge for museums – or indeed for any cultural organisation – is to devise a system of measurement that engages with the conditions and processes of learning, while also identifying what participants have learned or gained as a result of their experience. Arts Council England's Quality Principles for work by, with and for children and young people offer guidelines which, our survey suggests, many museums find helpful in planning services for schools. Work is also continuing across the cultural sector to develop a system of "quality metrics" that will facilitate common approaches to talking about value and impact.[39]

Arts Council England: Quality Principles for working with children and young people

- Striving for excellence and innovation
- Being authentic
- Being exciting, inspiring and engaging
- Ensuring a positive and inclusive experience
- Actively involving children and young people
- Enabling personal progression
- Developing belonging and ownership

It is clear from our research that museum educators take evaluation and measurement seriously, with 63 per cent of survey respondents reporting that they have revised the way they plan and assess their formal learning offer in the last three years. Their comments suggest that they see themselves as learners involved in a cycle of self-improvement and are determined to adapt to changes in the external environment.

From a situation several years ago when the use of Inspiring Learning for All and Generic Learning Outcomes was standard practice, there now appears to be little uniformity about the methods used to plan and evaluate formal learning in museums. Museums, on the whole, are devising their own evaluation methods, often customising elements of frameworks already in the public domain. Inspiring Learning for All remains popular, but responses to our survey indicate that the Arts Council's Quality Principles, the Sandford Award criteria and Learning Outside the Classroom indicators are also widely in use. Arts Council England's Quality Principles are especially valued as a tool for planning and self-reflection, with some museums explicitly designing programmes of activity around them.

> We are particularly focusing on the "Arts Council's" quality principle "being authentic" and have introduced a strong "real lives, real stories" focus to our history visits.
>
> *Independent social history museum, West Midlands*

Survey findings: evaluation and learning impact

91% use in-house questionnaires

39% use regular focus or advisory groups

38% use Inspiring Learning for All

28% use Arts Council Quality Principles for work by and with children and young people

28% use Sandford Award criteria

27% use Learning Outside the Classroom indicators

38 See Coles, Alec, 'Museum Learning: Not instrumental enough?', in *Learning to Live: Museums, young people and education*, Institute for Public Policy Research and National Museum Directors' Conference, 2009 www.nationalmuseums.org.uk/media/documents/publications/learning_to_live.pdf

39 www.artscouncil.org.uk/quality-metrics/quality-metrics

5. How do museums and schools assess the quality and impact of the offer? continued

Several larger museum services operating across many sites are developing their own toolkits in order to promote a shared organisational understanding of "excellence". Norfolk Museums have devised an Excellence in Learning framework for informal education which is just as relevant, in many key respects, for formal learning. It is proving a useful tool for self-improvement, as well as for advocacy to external funders. Staff at Tyne & Wear Archives and Museums have instigated their own quality framework, How good can we be, which identifies what they consider to be the hallmarks of a good quality museum learning experience and uses self-evaluation to identify areas for development. In a similar way, the Historic Royal Palaces have developed a framework to measure the outcomes of the "learning journey" around which all activities are planned.

Defining good practice in museum learning
Chiltern Open Air Museum

The success of the museum's new Stone Age-themed sessions led the education team to examine what was working and why. Inspired by the Arts Council Quality Principles and by the core competencies framework recently launched by the Group for Education in Museums, they set aside time to reflect on their collective skills-base and analyse the features of a good learning experience.

It has been an iterative process, which took the Quality Principles as a starting point and broke them down in ways that were relevant to the museum's methods of delivery. This eventually resulted in what the museum calls "a progression ladder", which identifies the stages that each individual member of staff travels through from the beginning of their career to becoming a skilful and experienced practitioner.

The museum has adapted the "ladders" for use as prompts when running peer or manager appraisal of sessions, thereby expressing a commitment to reflective practice which it feels can only benefit its audiences. It has been an exciting journey and one which the museum is keen to explore with its peers.

Thirty-eight per cent of respondents to our survey do not currently invite children and young people visiting with school groups to offer any kind of feedback. The majority that do employ a variety of methods to find out how children and young people feel about their experience and what they have learned, including online questionnaires, plenary discussion, visitors' books, stickers, post-it notes, postcards, letters, pictures and mood boards, not to mention the power of simply talking and listening.

> We engage young people to write blogs for our website and gather feedback from sessions through set tasks such as writing and sending a postcard or short letter.
>
> *Independent social history museum, London*

Several respondents to our survey would welcome the opportunity to carry out in-depth research into how learning in museums impacts on academic attainment, since they recognise that this issue has a bearing on how museums design and market their services for schools. Yet many experienced commentators consulted in the course of this review query the wisdom of claiming a causal connection that cannot easily be proved and advise museums to base their advocacy on a more limited but nonetheless valuable range of potential outcomes.

The question of what constitutes a "good enough" evidence-base, and by implication who it is designed to influence, surfaced in many contributions to our survey and focus group for "learning leads". Museum educators are eager to evidence the collective impact of the sector in ways that meet the priorities of government, local authorities, other educational stakeholders and schools and thereby unlock opportunities for collaboration and additional funding. But they acknowledge that this is best achieved in partnership with other organisations and with the support of researchers, above all in higher education, who can provide methodological expertise.

Since the introduction of the Research Excellence Framework in 2010, with its requirement for evidence of external "impact", universities have become increasingly open to public engagement and research collaborations. Indeed, 35 per cent of respondents to our survey report a general relationship with higher education, with 18 per cent indicating that this entails research. As might be expected, most of the research partnerships that were brought to our attention involve national museums or larger museums in urban locations, which have the advantage of a university partner close at hand.

5. How do museums and schools assess the quality and impact of the offer? continued

Research with partners in higher education
My Primary School is at the Museum

In the first six months of 2016 pupils from two primary schools and a nursery, from Tyne and Wear,

Swansea and Liverpool, based their day-to-day classes at a local museum for significant periods of time. The aim was to test what impact this unusual environment has on the children's learning and behaviour, as well as the wider benefits to family, community and school.

The idea was conceived by architect Wendy James and developed in collaboration with the Department of Education and Professional Studies and the Cultural Institute at King's College London. Academics from the Department of Education and Professional Studies at King's College advised on the project.

The museums themselves – Tate Liverpool, Arbeia Roman Fort in South Tyneside and the National Waterfront Museum in Swansea – could hardly be more different. But all were keen to explore the academic and social benefits of developing a different model of collaboration with local schools.

At a time when many museums are under threat of closure and school places are under pressure, there may also be economic advantages to sharing space and other resources. The three pilots will be used to assess the benefits and logistics of a partnership model that could, with time, extend to other places.

http://www.kcl.ac.uk/Cultural/Cultural-Institute/161107-Primary-at-Museum-Report-Stage-7-Visual-interactive.pdf

In a potentially ground-breaking piece of longitudinal research, SS Great Britain is working with the University of Bristol to track the impact of its Future Brunels programme on the attitudes, behaviour and ambitions of the students who have taken part. The Natural History Museum has recently hosted a series of six seminars, sponsored by the Economic and Social Research Council and involving museums all over the country, which have set out to establish a shared learning research agenda for Natural History Institutions.[40] And King's College London has launched a major research programme in partnership with the Science Museum which draws on Bourdieu's construct of "cultural capital" to look at how science centres can support the development of "scientific capital" in young people.[41]

Clearly much worthwhile research is taking place, alongside initiatives such as the London Museums Group's Share Academy, a long-term partnership with the University of the Arts London and University College London which provides a mechanism for sharing research outcomes and best practice.[42] But the picture is one of piecemeal research projects whose legacy and impact is often hard to trace. It seems there may be further to go in supporting research collaborations within the sector and ensuring they have practical consequences for the development of future policy.

Recommendation

3. Building and disseminating the evidence-base for formal learning in museums

Museums are eager to test and share approaches to evaluation, internal review and educational research, but recognise that teachers should have a vital stake in these processes too if museum learning is to become embedded in the day-to-day life of schools.

Larger museums, including nationals, should take a lead in coordinating research that involves the teaching profession and draws on the methodological expertise of partners in higher education as part of a larger strategy aimed at developing the evidence base for the value of formal learning in museums.

40 Dillon, J et al, *Learning Research Agenda for Natural History Institutions*, Natural History Museum, 2016 www.nhm.ac.uk/about-us/visitor-research-evaluation/learning-research-seminars.html

41 www.kcl.ac.uk/sspp/departments/education/research/cppr/Research/currentpro/Enterprising-Science/index.aspx

42 www.londonmuseumsgroup.org/wp-content/uploads/2015/07/Share-Academy-The-Art-of-Collaboration.pdf

6. How is formal learning developed, delivered and resourced by museums?

6.1 Long-term trends

Since the end of Renaissance in the Regions funding to regional hubs, with its requirement for regular reporting, it has become harder to assemble an overview of how museums are organising and resourcing formal learning provision. Only DCMS sponsored museums and Major Partner Museums are obliged to submit data returns to government or government agencies and they are, by definition, bigger and better funded than most other museums.[43]

Our own survey asked a number of questions about staffing and budgets over the past three years. But in the absence of a historical baseline and consistent sector-wide approach to data collection, this gives only a glimpse of longer-term trends rather than a complete picture of what has happened to formal learning provision in museums since 2010. Museum Development South West carries out an annual survey of accredited museums, which uses headline indicators across a range of activities, including formal learning, to monitor the state of the region's museums. This simple and uniform way of reporting operational data is being piloted in other regions and may offer a template that could in due course become more widely used.[44]

6.2 Reductions in public spending

The backdrop to this review is a sharp contraction in public spending, which has hit local authority museums, especially but not exclusively in the North and Midlands, very hard.[45] Research commissioned by the Arts Council in 2015 found that total net expenditure by local authorities on museum and gallery services had decreased by seven percentage points between 2003/4 and 2013/14, with steep increases for funding in culture and related services between 2006/07 and 2008/09, followed by year on year decline.[46] A recent report by the Heritage Lottery Fund into the funding of heritage by local authorities shows a broadly similar pattern and suggests that the commercialisation of services is now a high priority.[47]

The Museums Association has endeavoured to document fluctuations in funding and levels of programme activity through its annual Cuts Survey. In 2011 58 per cent of respondents reported a reduction to their overall budget and the following year 27 per cent of respondents reported that they had increased or introduced charges for school visits. From 2013 the survey has specifically asked museums whether school visits have decreased, stayed the same or increased. The results show a pattern of decline, followed by signs of recovery in 2015. Comments submitted to our survey suggest that this revival may reflect the prioritisation of formal learning as an income stream and the take-up of programmes built around the new national curriculum.

43 The data collected is high-level: Major Partner Museums are asked about expenditure on education staff and programme, the numbers of children and young people, by key stage, engaged in self-directed visits and facilitated visits and the number of children and young people involved with on-site and outreach activities. DCMS sponsored museums are asked about the number of children and young people involved with facilitated and self-directed visits made by visitors under 18 years old and in formal education.

44 www.southwestmuseums.org.uk/publications-resources/research-and-data

45 www.museumsassociation.org/campaigns/funding-cuts/19062013-museum-closures-map

46 *Research to understand the resilience, and challenges to this, of Local Authority museums*, TBR in partnership with Pomegranate Seeds LLP and Scott Dickinson, Arts Council England, August 2015, page 13 www.artscouncil.org.uk/publication/research-understand-resilience-and-challenges-local-authority-museums

47 *Local Authority Funding in the Heritage Sector*, BOP Consulting, Heritage Lottery Fund, June 2015

6. How is formal learning developed, delivered and resourced by museums? continued

Museums Association cuts survey Question: Has the number of school visits decreased, stayed the same or increased in the past year?[48]			
	Decreased	**Stayed the same**	**Increased**
2013	31%	42%	23%
2014	36%	35%	20%
2015	29%	28%	42%

As a non-statutory service, museums nevertheless remain vulnerable when local authority budgets contract. Derby Museums have developed a flourishing education programme in recent years, based on what their director characterises as "a relationship not a transaction" with schools. But there may be no funding at all in Derby for non-statutory council services from 2018-19, which leaves the city's museums, in the words of the director, contemplating the paradoxical prospect of "success and Armageddon" at the same time.

However successfully museums adapt to changing circumstances, cuts to local authority spending remain an existential threat in many parts of the country. And without ongoing investment in collections, exhibitions and displays, it goes without saying that the quality of the learning experience available to children and young people in our museums will inexorably decline.

6.3 Staffing, budgets, space and professional development

Responses to questions in our survey about the overall resource available for formal learning diverge sharply, with some museums reporting increased investment and others recording dramatic reductions in staffing, budgets and other elements of delivery. Where funding has increased, it often appears to be as a result of investment from HLF, the Arts Council and other sources. Decreases are mostly attributed to cuts in public spending, particularly in museums run by local authorities.

> We had no educational staff three years ago – now (we have) a full-time education officer and a small team of volunteers.
>
> *Independent industrial history museum, East Midlands*

> There was previously an education team of about six. Recent staffing re-structures have reduced this to one and learning is only half of my role. We are heavily reliant on volunteers for our formal learning and have recently employed a freelance artist to run our half-term holiday activities.
>
> *Local authority museum service, East Midlands*

Survey findings: staffing levels

24% say the number of full-time equivalent staff delivering formal learning has increased in the last three years

47% say the number of full-time equivalent staff delivering formal learning has stayed the same in the last three years

22% say the number of full-time equivalent staff delivering formal learning has decreased in the last three years

Many museums report that they are now more heavily dependent on freelance staff and volunteers to deliver formal learning, in effect a casualisation of the workforce that reflects wider trends in the public sector and economy at large.[49] The sector's lead professional development bodies recognise that this has considerable implications for their activities, since it means they are no longer dealing with a stable and consistently "professionalised" group of educators, but must instead develop strategies for recognising and developing the skills of a more varied and fragmented workforce, including volunteers, artists and freelancers.

48 These figures are based on the following response rates: 115 museums in 2015; 95 museums in 2014; 124 museums in 2013.

49 See for example Hudson, Maria, *Casualisation and Low Pay: Report for the TUC*, Trades Union Congress, April 2014

6. How is formal learning developed, delivered and resourced by museums? continued

> With the loss of Renaissance funding we lost our two Learning and Access posts, leaving myself as the only member of staff to deal with formal learning. I recruited a small number of freelancers to help ease the pressure on my time. I would like them to deliver more, but I am restricted by their availability and budget constraints.
>
> *Local authority museum service, North West*

External funding for new posts has often led to more opportunity for professional development. But many museum educators also report that it is proving more and more difficult to take time away from their desks and that budgets for professional development are shrinking. This is particularly true of educators working in galleries (or museums with galleries).

> There is only me and I can't remember the last time I attended any course related to my role in Museums and Galleries. The programme is delivered by a team of casual staff. They get one half day a year in-house training – we have to pay them to attend.
>
> *Local authority museum service, Yorkshire and the Humber*

Many museum educators report recent reductions in their budget and the likelihood of more to come. Nearly twice as many survey respondents say their budget has decreased as increased, while nearly half report that it has stayed the same. Underneath these figures there are regional variations, with museums in the North and Midlands and galleries (or museums with galleries) more likely to report a downward trend. This may be because they are part of a civic infrastructure that has borne the brunt of public sector cuts.

Survey findings: budget levels

16% say their budget had increased
(13 % in the North and Midlands; 20% in the South)
(19% in museums; 9% in galleries/museums with galleries)

46% say their budget had stayed the same
(45% in the North and Midlands; 47% in the South)
(46% in museums; 46% in galleries/museums with galleries)

31% say their budget had decreased
(35% in the North and Midlands; 28% in the South)
(27% in museums; 42% in galleries/museums with galleries)

The space and facilities available for formal learning have not changed significantly over the past three years: 21 per cent of respondents report that investment in space and facilities has increased; 66 per cent report no change; and 10 per cent report a decrease. Investment in the creation of teaching resources is holding steady in most museums, but with divergences that mirror the contrasting fortunes of the sector: 30 per cent of respondents say there is more investment in learning resources 25 per cent say there is less and 39 per cent say it has stayed the same.

6.4 Charging models and entrepreneurship

One response to budgetary pressures is to adopt a more commercial approach to providing services for schools. Our research shows that many museums have overhauled their charging structures for formal learning or are well on the road to doing so, albeit with varying degrees of success. For while it is easy to talk about the need for new business models, it is much harder to understand what that entails in the context of wider organisational values and structures.

Responses to our survey indicate that museums are sometimes reluctant to relinquish cherished ideals about free public services, especially if they are part of a local authority set-up that schools themselves have come to regard as free at the point of delivery. By contrast, it is clear from our research that museums in the independent sector are more accustomed to building the business case for everything they do.

Arriving at a model that can pay its way or even partially cover its own costs is a gradual process that requires commercial acumen, willingness to experiment and a thorough knowledge of the market. Pressure to generate income can also mean that museums are inclined to prioritise other activities such as room hire, on occasion to the detriment of formal learning.

> The service is under considerable pressure to meet income targets and this means increased commercial activity – weddings, room hire, etc. These activities take priority over school bookings because they generate more income.
>
> *Local authority museum service, Yorkshire and the Humber*

6. How is formal learning developed, delivered and resourced by museums? continued

Survey findings: income targets

52% say they have an income target

11% say it has become easier to meet their income target in the last three years

53% say it has become more difficult to meet their income target in the last three years

64% say that "schools paying for services" contributes to core funding

Approximately half the museums in our survey have some kind of income target and say it has become more difficult to meet that target in the last three years. Many museums are finding it hard to generate new custom and take their business model to the next level. Some suggest that there is an urgent need for research and training in models of "entrepreneurship" that can be shared.

> We find the same schools come for the same sessions year on year. It is difficult to develop new activities and promote effectively to schools to gain a return on investment. We also have the pressure to deliver more, without an increase in the number staff. This makes meeting increased income targets very difficult.
>
> *Local authority museum, South West*

The encouraging news is that schools are often willing to pay for the services they use. Among many examples Heritage Learning Hull has evolved into a business that now covers its own costs and helps other museums reappraise their business model; Shropshire Museums run a successful and profitable outreach service; and Tyne & Wear Archives and Museums have been surprised to note that the introduction of a charge for loans boxes has had no deterrent effect on bookings.

> Pupils pay £5 per person. We need to attract 8,000 school children per year to reach our target. We have exceeded our target every year since 2013. We also offer a consultancy service with a financial target of £4,000 per year which we exceed.
>
> *Independent museum trust, North East*
>
> We need training in how to become more commercially minded. Education departments are increasingly under pressure to make their service cover its costs. If you have no formal business management training, this is a daunting task.
>
> *Independent military museum, South West*

Most of the comments in our survey relating to income generation revolved around persuading schools to pay for services. But a more entrepreneurial approach to formal learning can obviously involve other funders too, including trusts, foundations, local businesses and commissioners in public health. Often the key to unlocking such funding is an imaginative proposal that shows how learning can be delivered differently. Manchester Museum takes an inflatable copy of its own building, complete with performance area, exploratory activity spaces and high quality projection and audio equipment, into school halls across the city. The locally-based Zochonis Foundation had funded the museum on previous occasions, but gave substantially more funding for the pioneering Inflatable Museum because it combined spectacle and fun with a serious underlying purpose.

A successful model of cost recovery
Heritage Learning Hull

Seven years ago the heritage learning service in Hull, faced with cuts and changes in staffing, set about researching ways of becoming sustainable. The manager of the service spent the best part of a year exploring what successful businesses have in common and working out how these lessons could be applied to learning provision for the 11 museum, gallery and heritage centre sites in the city.

With help from a business mentor and transitional funding from Arts Council England, the Learning Manager implemented a change management process that has put the service on a firm commercial footing. It now operates on the basis of full cost recovery.

The key to success has been a rigorous focus on quality of experience, value for money and customer care, underpinned by a proud emphasis on Hull's distinctive heritage, from its role in the whaling industry to the exploits of pioneering female aviator Amy Johnson. "Designed with you and for you" has become the mantra of the service.

No fewer than 41 schools in Hull have recently come together to commission a "Curriculum for Hull" ahead of the City of Culture celebrations in 2017. Their "buy in" is a measure of how far the service has developed in only a few years and how much it is now valued by the city's schools.

www.heritage-learning.com

6. How is formal learning developed, delivered and resourced by museums? continued

Recommendation

4. Fostering new and more sustainable financial models for formal learning in museums

Because of financial pressures many museums are looking for new ways of monetising or otherwise funding their services to schools. But there are still relatively few tried and tested approaches from which they can learn or opportunities to share experience in finding and cultivating new sources of funding.

Sustainability in formal learning should be a major focus for research, training and innovation funding in the sector, with museums themselves taking responsibility for disseminating the successful models that already exist and exploring how they relate to larger processes of organisational change.

7. What are the barriers and enablers of delivering and sustaining a high quality formal learning offer?

7.1 Identifying curriculum need

The factors that continue to make for a successful learning offer for schools come as no surprise: excellent marketing, smooth administrative systems, friendly and knowledgeable staff, imaginative pedagogy and well-targeted resources are all essential if the relationship that museums have with schools is to thrive. Museums need to approach schools with the same rigour as any other segment of their audience, defining interests and priorities that need to be met.

> [My local museum] rates as one of my top museums for Key Stage 3 – for communication, workshops, ease of booking, friendliness, ease of access, facilities, etc.
>
> *Secondary teacher, London*

> It has taken schools quite a long time to understand how the curriculum changes will impact on their school, particularly around the history curriculum. There is more emphasis on skills-based learning and devising sessions which are more broadly based and cross-curricular rather than purely history focused.
>
> *Independent social history museum, London*

The biggest challenge of the last few years has been in fulfilling the demands of the new curriculum. But it would appear from responses to our survey that, after an initial period of introspection following its introduction, schools are turning back to museums for experiences which will extend and enrich their pupils' learning. Some topics may have disappeared, but new ones are taking their place. Curriculum change, it turns out, is both a barrier and a driver.

7.2 Partnership with teachers

In our survey and focus groups both teachers and museum educators spoke about the value of long-term relationships, co-production of resources and sessions that go beyond the off-the-peg workshop. Wrap-around resources that help teachers prepare for a museum visit and consolidate it after the event are seen as vital. For independent museums with a volunteer workforce this can be a challenge, but not necessarily an insurmountable one, and small interventions can make a decisive difference to the way they operate.

Working in partnership with teachers
The Museum of Policing, Cheshire

The Museum of Policing sits within a working police station and is staffed entirely by volunteers who once served in the police. They are passionate about making their collections more accessible to local schools, but limited by constraints on space and their own time.

Curious Minds, the Bridge organisation for the North West, came to their aid by offering the services of a learning expert who helped them plan the content of the museum's first ever loans box. With its ready-made network of community liaison officers who visit schools to talk about their work, the museum already had in place the perfect distribution mechanism for its embryonic outreach scheme.

The staff chose carefully which objects to put in the box, making sure that they would suit the needs of the curriculum. They also developed a teacher's resource combining descriptions of the items from a historic and policing perspective, activity proposals focusing on history, literacy and citizenship, links to art, drama and new media, a list of other resources available from the museum and a map and timeline charting the development of the police force.

In the later stages of the project, they worked with a local primary teacher to pilot the box and give feedback about its potential. This was a small project with a big impact, which has given the museum volunteers a detailed understanding of what schools really need and a practical delivery vehicle for their future programme.

> We are seeing more flexibility and willingness to engage at an earlier stage in the process. We like to think we have driven this forward in the local area by forming consortia of heritage organisations and schools. We hope we are being rewarded with an increased appetite in schools for demanding sessions tailored to exactly what they need.
>
> *Local authority museum, South East*

Our research shows that many museums understand the value of long-term partnership with the education sector

7. What are the barriers and enablers of delivering and sustaining a high quality formal learning offer? continued

and maintain good channels of communication with local schools, through regular email bulletins, professional development programmes, teachers' advisory groups and sometimes more targeted developmental work with headteachers and governors. The emergence of Specialist Leaders in Cultural Education (SLICE) and equivalent schemes in various parts of the country has also been helpful in giving museums and other cultural organisations an identifiable point of contact and champion in many schools.

Working with Specialist Leaders in Cultural Education to raise attainment
Leeds Museums and Galleries and Bradford Museums and Galleries in partnership with CapeUK

In response to the Yorkshire and Humber Challenge, an initiative aimed at raising levels of attainment in the region's schools, CapeUK invited 25 teachers to become Specialist Leaders in Cultural Education and work closely with a cultural partner in a coordinated programme of action research. Two schools have used regular visits to various museums sites in Leeds and Bradford as a stimulus for language development and literacy.

Staff at West Oaks Special School in Leeds have noticed the profound impact on their pupils of regular contact with inspiring objects, new environments and skilful museum staff. Many children and young people who are nonverbal in other contexts are willing to talk when they visit the museum and most pupils have at least doubled their expected levels of progress in less than two terms.

Farnham Primary School is a larger than average sized primary school in Bradford, where almost all pupils speak English as an additional language. The writing skills of Year Three and Five pupils have been transformed by their involvement with The Art and Science of Noticing – a Bradford Museums and Galleries programme which develops children's natural curiosity alongside literacy, recording skills and enquiry.

Ofsted graded the school "outstanding" in March 2016, giving special mention to its purposeful pursuit of opportunities for learning outside the classroom.

Many Museum Development teams offer museums small grants to support teacher secondments to museums (similar to the 'Learning Links' programme operated several years ago by the Museums, Library and Archives Council). The principle of paying teachers to take part in such schemes is generally acknowledged to be important, as a way of recognising the effort required over and above an already heavy workload. Those who have taken part testify that the benefits, in terms of increased trust, insight into the needs of the education sector and resources that are fit for purpose, greatly outweigh the modest costs involved.

7.3 Costs and transport

The cost of transport is regularly cited by museums and teachers as the single biggest impediment to taking children and young people out of school. From responses to our survey it is clear that rural museums are at a particular disadvantage because of poor public transport and the distances involved in getting from A to B, which greatly limits their potential for developing new educational audiences.

> Money is the main deciding factor [for my school], as travel and entry costs often mean we cannot visit as many times as we'd like.
>
> *Primary teacher, Leeds*

In London, where Transport for London has more power over transport provision than equivalent authorities in other parts of the country, schools benefit from free off-peak travel. They can also access the City of London School Visits Fund, which helps with the cost of transport and teacher cover.[50] Elsewhere there are examples of museums that have struck special deals with local coach companies and transport providers. The Museum and Gallery in Hartlepool, for example, have negotiated an arrangement with the council's Integrated Transport Unit whereby schools can book its fleet of buses at a specially discounted rate for cultural visits.

For the most part, however, the cost of transport is an issue over which museums have little control.

50 www.cityschoolvisitsfund.org.uk

7. What are the barriers and enablers of delivering and sustaining a high quality formal learning offer? continued

Some would say it is a red herring, pointing out that schools which believe in cultural education need no inducement to fund the associated costs. Our task, they would argue, is to make the case for museums rather than let non-user schools opt out of learning beyond the classroom altogether.

7.4 Better data

An allied issue is how museums collect data about school visits and use this to identify areas of low engagement. Contributors to our survey and focus group for "learning leads" see data collection and analysis as a vital tool for extending the reach of their formal learning provision. But they express uncertainty about whether the sector as a whole is following consistent data collection processes and using its collective insights to target non-user schools. They observe that it is not unusual for museums to discover that they are attracting the same schools as other cultural organisations in the immediate vicinity. Understandably, museums view repeat visits as a token of success and a welcome means of maintaining audience numbers, but does this also prevent them from reaching out beyond a core base of regular users?

From our survey we know that nearly all museums record basic data relating to school visits (location of school, numbers of pupils, phase of education etc.), but that fewer than half are routinely capturing socio-economic data about the schools that use their service. Responses to our survey suggest that larger museums are more likely to have the capacity to do this than smaller museums (64 per cent versus 32 per cent).[51] As might be expected, university museums report that they use data to support the "widening participation" agenda and determine where they can best put their effort. Thus, for example, Manchester's four university museums run a Cultural Explorer Programme for Year Five/nine year old learners in the local wards of Ardwick, Hulme, Moss Side, Rusholme, Longsight and City, where take-up of higher education is particularly low.[52]

In general, it would seem from our consultation that the sector lacks the systematic processes for detailed data collection that could inform a more strategic view of the work it does with schools and that there is only limited evidence as yet of the kind of regional co-operation which might make this possible. There are many sources of data in the public domain that can help, including Arts Council England's own Cultural Education Data Portal, the Office of National Statistics and the Index of Multiple Deprivation.[53] But if museums are to make inroads into areas of low engagement, then they need even better training, tools and support for understanding their existing audience and identifying the gaps.

Survey findings: collecting data

44% capture socio-economic data relating to schools

70% capture data relating to special educational needs and disability

37% capture data relating to English for speakers of other languages

> [We are] keen to develop effective methods of collecting, analysing and presenting school and pupil socio economic data – training and practical support in this area would be very welcome. One of the real weaknesses in formal education data recording is lack of consistency in terminology – eg what we mean by facilitated session and so forth.
>
> *Independent social history museum, South West*

> We are not currently in a position to collect more than basic data on a routine basis, as this is done by a part-time employee who deals with the bookings (and is also our book-keeper). However, we would collect further data if required by grant funders, and if/when we can get funding for a part-time Education Programme Coordinator.
>
> *Independent industrial history museum, South West*

51 Larger museums were defined as having an annual budget of more than £500,000, smaller museums as having a budget up to £500,000.

52 The organisations in question are Manchester Museum, The Whitworth, The John Rylands Library and Jodrell Bank Discovery Centre.

53 www.artscouncil.org.uk/research-and-data/children-and-young-people

7. What are the barriers and enablers of delivering and sustaining a high quality formal learning offer? continued

Recommendation

5. Capturing and using data to target low engagement

There is at present no coordinated sector-wide approach to capturing detailed data about the schools that use or don't use museums. This prevents many museums from taking a more strategic approach to targeting non-user schools and thereby extending their reach to every child. In turn, the lack of comprehensive data inhibits successful learning and advocacy for the sector as a whole.

Museums and other agencies should examine how the sector is gathering and using data relating to schools and put in place the framework and training that might encourage a more analytical and joined-up approach.

7.5 Place-based learning

One of the key enablers of museum learning in recent years has been the emergence of a place-based curriculum in many parts of the country, including in London, Bristol, Derby, Hull, Surrey, Leicester, Liverpool and Essex, which has provided a strong collective marketing focus for museums and given schools a compelling justification for using their collections.

Good schools have always developed a relationship with people, places and heritage sites in their immediate locality. But initiatives such as the Royal Society of Arts' Area-based Curriculum and the Heritage Schools programme run by English Heritage/Historic England have given additional impetus to curriculum models that promote civic awareness and a sense of place.[54]

Evaluation of Heritage Schools so far shows that the programme has had a powerful impact on the participants and created a substantial legacy of increased confidence and historical skills among teachers and pupils alike.[55] A key ingredient has been the connectivity provided by Local Heritage Education Managers in each of the eight regions taking part and the role of continuous professional development for teachers in energising the project.

Proposals in the government's recent Culture White Paper for Heritage Action Zones, a new Great Place scheme and a Cultural Citizens Programme, based in areas of high deprivation and low engagement, are likely to mean that place-based learning assumes a new importance in years to come. Museums must be encouraged to seize the opportunities offered by Local Cultural Education Partnerships to explore this agenda with other organisations in the arts and heritage sector.

> Gives [pupils] an understanding of how things change over time and why. It's important in deprived areas where they need to have aspirations; it sounds dramatic but I do think it has given them an aspiration for the future; things change, you can change, you are not defined by your area.
>
> *Teacher in Manchester*
> *(commenting on Heritage Schools programme)*
>
> *I think the difference has been the drive of the project, the CPD... people have been able to see what is available and connect into things. It makes all the difference: a CPD event, if done well, as these have been, can be inspirational and people get on board with it, get enthusiastic and want to run with it... they came back buzzing.*
>
> *Teacher in Great Yarmouth*
> *(commenting on Heritage Schools programme)*

54 www.thersa.org/action-and-research/rsa-projects/creative-learning-and-development-folder/area-based-curriculum

55 The project has taken place in North Tyneside, Richmond and North Yorkshire, Great Yarmouth, Barking and Dagenham, Bristol, Telford, Manchester, Leicester. *Heritage Schools – End of Project Evaluation*, Qa Research, Historic England, September 2015 http://content.historicengland.org.uk/content/docs/education/heritage-schools-evaluation-report.pdf

7. What are the barriers and enablers of delivering and sustaining a high quality formal learning offer? continued

Main features of The Culture White Paper, 2016

- Cultural Citizens Programme led by Arts Council and HLF in 70 areas where participation is lowest
- Measures to increase diversity and inclusion in workplace
- Continued emphasis on health and well-being agendas
- Support for a new Great Exhibition of the North
- £40 million Discover England fund
- Involvement of national players in developing cultural partnerships
- Support for a new Great Place scheme through arts and heritage lottery funders
- Heritage Action Zones
- Continued support for GREAT Britain campaign and global cultural export programme (including Shakespeare Lives)
- New Cultural Protection Fund for countries recovering from acts of cultural destruction
- Various changes to VAT and tax relief to benefit museums in galleries
- Support for new Commercial Academy for Culture and associated initiatives
- Review of Arts Council England
- Review of the museum sector

A Curriculum of North Kent
Place-based cultural education

Spurred on by changes to the national curriculum, a consortium of heritage partners and primary schools from North Kent came together in 2014-15 to design and deliver programmes of cultural engagement for primary school children throughout the academic year.

The key to establishing a successful partnership with schools was the recruitment of a coordinator who worked across several museums and invested time in getting to know and understand schools' individual plans. Each school was awarded a small bursary, which helped incentivise participation and gave teachers and museum educators a shared focus for planning.

This budget could be used flexibly, for example to support the costs of coach travel, entrance fees and special sessions on site, outreach from heritage partners and follow-up visits from arts practitioners.

Although funded as a one-off project, A Curriculum of North Kent built on a philosophy of responsive, place-based learning that has evolved over many years and continues with the recent launch of 100 Objects that Made Kent.

A Curriculum of North Kent was led by the Guildhall Museum in Rochester and also involved the Medway Archives and Local Studies Centre, Rochester Cathedral, the Historic Dockyard in Chatham and the Royal Engineers' Museum in Gillingham. It was supported by South East Museum Development, the Royal Opera House Bridge, South East Grid for Learning and Arts Council England.

7.6 National/regional partnership

Place-based learning is also central to the Museums and Schools programme, funded by the Department for Education, which has enabled national and regional museums to collaborate in 10 different parts of the country and provided a solid framework of peer support in which to try out new ideas. Museums have found that the kudos of working with a national partner has assisted considerably in persuading schools to take part.

7. What are the barriers and enablers of delivering and sustaining a high quality formal learning offer? continued

This is only one among many examples of national museums building on the legacy of the Strategic Commissioning programme (2004-11) to explore how they can support regional museums in working with schools, for example through touring initiatives such as Tate's ARTIST ROOMS, the National Portrait Gallery's Picture the Poet, the Natural History Museum's Real World Science and the British Museum's various partnership programmes.[56]

A distinguishing feature of Museums and Schools (2012-17) is that it deliberately targets areas of high deprivation and low cultural engagement, and shifts the balance of power towards regional museums by putting them "in the driving seat" and giving them responsibility for the project budget. Experience has varied across the 10 partnerships, according to capacity and circumstance. There are strong emerging indications, however, that the programme has influenced classroom practice for the better, by encouraging a more creative and cross-curricular approach to using primary source materials.[57]

A particular strength has been the encouragement this project has offered schools to embed museum learning in a long-term programme of enquiry involving several museum visits. In many places it has also left a lasting legacy of online resources, from Brunel's SS Great Britain's award-winning interactive game Full Steam Ahead, which explores the practical and scientific possibilities of ship-building, to the suite of curriculum resources relating to famous local people and places developed by museums in the Tees Valley through their partnership with the National Portrait Gallery.

Several of the museum directors and stakeholders interviewed for our research note the "brand" value of working with national museums and the influence national museums can wield in advocating for the sector as a whole. They would like to see this pastoral and advocacy role expand, for example through digital initiatives, such as the British Museum's Teaching History with 100 Objects which draws attention to outstanding objects in regional collections. But they also understand the resource implications of collaboration and the difficulties involved in getting the model right: regional museums don't see themselves as the passive recipients of national largesse any more than national museums want to be seen as the fount of all knowledge.

Recommendation

6. Fulfilling the potential for place-based learning in every part of England

Place-based learning offers opportunities for partnership and economies of scale that provide a focus for collaboration between national and regional museums and a strong rationale for Local Cultural Education Partnerships. Given the continuing importance of place-based learning in cultural policy, there is a growing need to consolidate and promote existing models.

Museums should ensure that they are firmly embedded in Local Cultural Education Partnerships, so that they can advocate for the power of formal learning in museums and work with other providers to develop a rich and varied place-based curriculum.

7.7 Digital technology

The three year programme of Digital Culture research carried out by MTM on behalf of Nesta, Arts Council England and the AHRC into the cultural sector's engagement with digital technology finds that museums are, by their own admission, late adopters and often lag some way behind other cultural organisations. On the other hand, the Digital Culture research also found that museums are significantly more likely than the sector as a whole to offer educational interactive experiences.[58] This tallies with the decidedly mixed picture uncovered by our own consultation and research. Many museums lack basic digital infrastructure, let alone the knowledge or budgets that would enable them to develop their digital offer. Our survey shows that digital access is particularly limited in museums in rural locations, where broadband and wireless coverage is uneven.

56 www.tate.org.uk/artist-rooms/learning; www.npg.org.uk/whatson/picturethepoet/exhibition.php; www.nhm.ac.uk/about-us/national-impact/real-world-science.html; www.britishmuseum.org/about_us/community_collaborations/partnerships/talking_objects/talking_objects_national.aspx

57 ACE Museums and Schools Programme: Process evaluation and scoping an outcomes evaluation framework, Vivienne Reiss and Bridget McKenzie, April 2015 (unpublished)

58 http://artsdigitalrnd.org.uk/features/digital-culture-2015

7. What are the barriers and enablers of delivering and sustaining a high quality formal learning offer? continued

Survey findings: digital infrastructure

45% have internet access in gallery spaces
33% have computers in gallery spaces
33% thought it would not be desirable to have computers in gallery spaces

51% have internet access in education spaces
22% have computers in education spaces
36% thought it would not be desirable to have computers in education spaces

29% have an interactive whiteboard
38% thought it would not be desirable to have an interactive whiteboard

> We have wi-fi in some of our learning spaces, but not others. A few years ago we bought a lot of iPad Touches to develop blended learning, but schools don't want to use it. They can afford much better kit than us, so we just look shoddy – our USP is the alternative, real objects, real experiences, fire and knives... Having said that I would love a 3D printer. We also use Skype to do Q and As with schools.
>
> *Local authority museum service, South West*

If responses to questions in our survey about digital technology seem at times conflicted, it would appear that this is because museum educators value the authenticity of real objects and the one-to-one encounter with museum experts who can offer a different pedagogical approach from that of the classroom teacher. In our focus groups teachers likewise spoke about the novelty of hands-on, physical experiences as a refreshing alternative to the immersive online world inhabited by their pupils. There is also genuine concern among both museums and teachers about issues of internet safety and the place of mobile technology in learning, especially in poorer areas where not every child has the latest equipment.

> Lessons using computers, iPads, interactive whiteboards are what the pupils get at school. We aim to enhance learning in ways which they cannot get at school. If it can be done in school, what's the point in going to a museum to do it?
>
> *National military museum, London*

But teachers and museum educators recognise that children and young people have grown up with digital technology and access it in every aspect of their lives. Teachers in our focus group were clear about its vital role in giving children and young people agency in their own learning. They spoke about the value of interactive touchscreen activities that invite closer investigation of objects and ideas; imaginative ways of incorporating virtual and augmented reality into the museum experience; and digital tools for developing and sharing a creative and critical response to using the museum.

> We should be working with museums to take digital to the next level.
>
> *Secondary teacher, London*

7. What are the barriers and enablers of delivering and sustaining a high quality formal learning offer? continued

Using augmented reality in historic sites
Lancashire Museums

At Clitheroe Castle, a ruined early medieval castle, the education team attempt to recreate the original edifice with sand and lolly sticks during school visits. But they know it is hard for children (and adults) to imagine what the site would have looked like when it was complete.

With this in mind, Lancashire Museums commissioned Lancaster University's Institute for the Contemporary Arts (LICA) to create animations that would translate what visitors can see today into what the castle would have looked like in the past, including key items of architectural vocabulary and indications of how ground levels have changed.

The animations were put onto Nexus 7 tablets, with seven key points around the site where you can touch the tablet to trigger the animations. The inside of the keep now builds up in three layers before your eyes, you can "fly" over the top of the keep to see the roof, the castle walls and long-lost buildings now appear as you walk around the castle mound and there is a long, high view, as though a medieval drone has flown over the complete castle, to show the scale of the entire site.

For younger children, a special section of the animations shows the fabled Clitheroe dragon, who claws his way out of a hole in the keep and makes his escape. What the visitor, child or adult, gets from augmented reality on the tablets is images they can explore in their own time that tell the story of the castle and activate the imagination.

The project is part of the DfE-funded Museums and Schools Programme.

Our research suggests that many museums are developing a strong digital offer, as a marketing channel, repository of classroom resources and creative or interpretive experience in its own right. There are now several examples in the sector of portal websites where museums can set out their stall, with search functionality that matches teachers up with organisations and resources which can meet their needs, including the long-established My Learning and more local ventures such as Connecting with Culture in the South East.[59] Although not solely aimed at teachers, Culture24's Show Me also offers an enticing gateway to games, collections, videos, stories and homework help that can support formal learning in museums.[60] Of course the challenge for all such initiatives is to maintain the dedicated budgets and staffing capacity that will make potential users aware that the site exists and keep the content up-to-date.

Individual museum websites vary enormously, from a few pages on a local authority site to sophisticated web platforms with a smooth user interface and plenty of media-rich content. It is striking that some museums seem resistant to introducing online booking systems, despite the importance teachers attach to easy booking processes. Research commissioned by Curious Minds in the North West also draws attention to websites with missing content and poor copy.[61] This is, it seems, an area in which expert help, offered at a range of different levels, is still needed.

Survey findings: uses of digital technology

18% have an online booking system for schools

31% thought it was not desirable to have an online booking system for schools

72% use digital technology as a marketing and communications tool

15% offer digital trails and games

46% thought it was desirable to offer digital trails and games

40% offer pre and post learning resources in a digital format

46% use digital technology as an educational element in displays and exhibitions

59 www.mylearning.org/; https://connectingwithculture.com

60 www.show.me.uk

61 May, Katy, *Museums & Heritage Sector, Working with children, young people and schools*, Curious Minds, April 2013

7. What are the barriers and enablers of delivering and sustaining a high quality formal learning offer? continued

While it may be too soon to say that the days of the paper worksheet are over, our survey provided many examples of museums developing adventurous digital resources as part of a "blended" learning experience, from Skype Q and A sessions with experts to special apps for young people with learning disabilities and the innovative use of audio links to collections via SoundCloud. Some are exploiting free platforms such as YouTube: for example, @Bristol Science Centre uses the services of professional science presenter Ross Exton and other members of the in-house team in a series of entertaining short films about various aspects of science, many of which clock up extremely large viewing figures.

> Our work with digital learning – in particular our five iPad minis – has been transformational in the way we can get children to engage with objects and gallery displays. Using apps that can be mastered in about two minutes, plus creating some blended learning opportunities and working on pre-visit and post-visit materials, we feel we are delivering an innovative service that adds considerable value to school visits.
>
> *Local authority museum service, South East*

Among several examples of children and young people exploring the use of digital technology as a creative medium and tool, Historic Royal Palaces' Movie Maker Mission stands out for the sheer scale of the undertaking. Working with Aardman Animations, the team enlisted the drawing and storytelling talent of thousands of school children to animate the chequered history of 500 years at Hampton Court in a lively collaborative film. Our consultation also uncovered a few instances of museums collaborating with the gaming industry to create resources that give children and young people a playful way of exploring buildings and collections: both Tate and The Whitworth, for example, have experimented successfully with Minecraft.

One of the biggest barriers to using digital technology is its cost and the speed with which it is developing. Open source, off-the-shelf solutions are often readily available for a relatively low outlay. But complex projects requiring sophisticated functionality necessarily involve the specialist skills of digital agencies and developers, who typically charge day rates that museums struggle to afford. More and more, therefore, it makes sense for museums to collaborate with partners in higher education or host resources on existing platforms that are regularly updated, for example TES Global, the Google Cultural Institute and Historypin.

The digital arena is one in which national museums are well placed to take a lead by sharing their expertise and convening web-based initiatives that encourage schools to use their local museum. This happens already to some extent though such projects as the Imperial War Museum's First World War Centenary Partnership and the National Gallery's long-running but enduringly popular Take One Picture.[62] There is also scope for CPD providers specialising in cultural education to join forces with the well-established Museums Computer Group in supporting peer-to-peer learning, with the obvious proviso that differences in scale have a bearing on how easily learning can be transferred from one setting to another.

> I find case studies of larger museums with additional funding really demoralising, I want to hear and work with other small museums that accomplish amazing things on a real shoestring budget!
>
> *Historic house, London*

62 www.1914.org; www.takeonepicture.org

7. What are the barriers and enablers of delivering and sustaining a high quality formal learning offer? continued

Using Google Arts and Culture to host teachers' resources
York Museums Trust in partnership with Museum Development Yorkshire

Teaching Prehistoric Yorkshire set out to address the deficit of information and resources available to teachers about Yorkshire's place in prehistory, at a moment when this topic has assumed a new importance in the primary curriculum.

Working with Museum Development Yorkshire and supported by the Art Fund Treasure Plus scheme, York Museums Trust developed a set of resources about 15 unique prehistoric objects chosen from the museum's own collections and from those of five regional partner museums. Teachers were closely consulted throughout.

Each object is available as a high-resolution, downloadable image and accompanied by short films that encourage an enquiry-based approach to exploring where the objects were found and what they were for. There are also teachers' notes full of factual information and ideas for classroom activities.

An interesting feature of the project is that it is hosted on Google Arts and Culture, which gives museums a free and highly visible platform for curated content. Although Google thereby acquires a worldwide royalty-free right to the images, any commercial advantage is counteracted by the fact that the same images are also made available on Wikimedia Commons.

Teachers like the brand recognition associated with Google and the absence of problematic "pop-up" advertising. For museums, Google Arts and Culture has the advantage of providing high design values and the guarantee of long-term built-in maintenance.

www.google.com/culturalinstitute/beta/exhibit/teaching-prehistoric-yorkshire/gALiBNc44va_Jw

Recommendation

7. Increasing excellent digital practice through collaboration, partnerships and training

Digital capacity and expertise in the museum sector is uneven, with outstanding practice in some places and low levels of know-how elsewhere. There is, however, a clear imperative for museums to create and disseminate digital "cultural learning content" for a generation of learners who have grown up with digital technology.

National museums, specialist networks and CPD providers should support the sector in sharing good practice in digital engagement, through collaborative initiatives, training (at a variety of levels) and small amounts of funding for one-to-one consultancy and experimental partnerships (eg with artists, arts organisations, technologists in higher education etc).

7.8 Joined-up professional development and advocacy

A suitably qualified and motivated workforce provides the backbone of high quality formal learning in museums. Our research suggests that museum educators are naturally outward-looking, place a high value on opportunities to learn from one another and are fiercely committed to the work they do. It tells us that there is no shortage of professional development on offer, but that it can be difficult to take time away from the shop floor when time is at a premium and budgets are under pressure. Many of those consulted for this review also report that the landscape for professional development is more fragmented than before and that they would welcome some "joining up" of effort, not only in training the workforce but also in advocating to government, funders and the education sector.

> With limited staff and very little available budget, taking time away from work for valuable professional development opportunities is a luxury unfortunately.
>
> *Local authority museum service, West Midlands*
>
> We are really struggling in a small local authority museum service to deliver effective education provision… I would like a regional network to support non-educational professionals (I am from a collection management background) in developing and delivering education programmes.
>
> *Local authority museum service, East Midlands*

7. What are the barriers and enablers of delivering and sustaining a high quality formal learning offer? continued

Survey findings: investment in CPD for museum educators

22% say that investment in CPD has increased in the last three years

48% say that investment in CPD has stayed the same in the last three years

18% say that investment in CPD has decreased in the last three years

Among sources of professional development and advocacy mentioned in our survey, the Group for Education in Museums (GEM) and engage, the sector's two well-established professional development bodies for learning, command a high level of loyalty and run regular professional development events and modular training programmes for their members. Both organisations have strong regional membership structures and are committed to supporting museum educators at every stage of their career.

GEM has developed a new competency framework, which considers the skills people need to work in museum education and takes account of the fact that educators in smaller museums are often non-specialists, freelancers or volunteers. It sits alongside a CPD programme, offered at three levels and delivered in three blocks of two days, with a strong emphasis on the practical application of learning. Engage runs a popular four-day introduction to gallery education with the Institute of Education (now part of University College London), which complements its well-established Extend Leadership Programme for mid-career professionals in learning and education roles across the arts.

In addition, the sector's two main national membership bodies, the Museums Association (MA) and the Association of Independent Museums (AIM), offer generic professional development opportunities tailored to a wide range of individual and organisational contexts – the MA through its Associateships of the Museums Association (AMA) and Transformers programme and AIM by means of its Hallmarks framework. Neither scheme has an explicit educational focus, but both are nonetheless available to anyone with responsibility for learning.

Using a Museums Association 'Transformers' grant to innovate
Sheringham Museum Trust

Sheringham Museum in Norfolk is a small independent museum by the rural seaside, run by volunteers, one paid member of staff and a voluntary board of trustees. Since it receives no regular public funding, it has never been able to afford any interactive technology.

This changed when the museum's manager won a place on the 2015 Transformers programme, run by the Museums Association and funded by Arts Council England, which supports mid-career professionals in making transformational change. The funding allowed the museum to acquire Raspberry Pi micro-computers – small, inexpensive computers which were originally designed for educational use and have all the power needed for the creation of interactive displays.

Not only have the Raspberry Pi computers enabled Sheringham Museum to make budget versions of the kind of interactive displays available in national museums, they have also had the unexpected benefit of opening up opportunities to run computer coding workshops with children and young people from local schools.

The museum now offers support for the history, ICT and STEM curriculum by facilitating an after-school computer "coding club", at which children create new pieces of interactive software in a safe and stimulating environment. Many of the participants live in an area of high deprivation and would not otherwise have access to such opportunities.

Alongside these professional bodies, the regional Bridge organisations and Museum Development Officer (MDO) teams provide further help in negotiating the complexities of the education sector through training, collaborative programmes and, in the case of the MDOs, small development grants. Although they were not initially tasked with supporting museums, Bridge organisations now operate across the entirety of the arts and heritage sector and liaise with multiple local

7. What are the barriers and enablers of delivering and sustaining a high quality formal learning offer? continued

authorities encompassing many thousands of schools. Their eight formal areas of responsibility include Artsmark, Arts Award and the lead role in setting up Local Cultural Education Partnerships.

By contrast, MDO teams operate with less prescription and vary a good deal from one region to the next, but provide a broad range of support to museums, from help with accreditation to consultancy and training around formal education. Eight out of nine MDO teams sit within Major Partner Museums, which means they are well placed to broker relationships between larger and smaller museums in each region.

In some regions the MDOs and Bridge organisations work side by side through a formal memorandum of understanding and/or shared working practices. Several Bridge organisations have dedicated museum expertise within their teams and have carried out detailed research into how schools are using museums and other heritage sites in their region.[63] In Tyne and Wear the MDO team and Bridge sit within the same organisation, which makes for a genuinely joined-up operation.

From our consultation it is fair to say that the respective roles and remits of the various organisations charged with professional development and advocacy sometimes appear blurred to people working in museum education. They would welcome better mutual signposting of training and resources – for example a single web portal where all professional development events are aggregated – and more cooperation in the delivery of programmes and campaigns.

This is clearly where the Cultural Education Challenge, launched by the Arts Council in autumn 2015, has an important part to play. This national "call to action" for cultural organisations to cooperate in making sure that every child receives a rich cultural education takes its cue from three pilot programmes in different parts of the country and is led by an exemplary coalition of Arts Council England, the British Film Institute, Heritage Lottery Fund and English Heritage.[64] The aim is to bring about a closer alignment of cultural organisations in each of the 50 proposed LCEPs, so that they can work more purposefully in extending the reach of cultural learning.

Our consultation suggests that many museums grasp the value of partnership in bringing greater visibility, influence and creative opportunity. For example, Brighton Museums have been active in the consortium responsible for Our Future City, a collaborative programme aimed at improving the lives and life chances of children and young people in Brighton and Hove through cultural engagement and creative skills.[65] At the other end of the country in the North East, Beamish Museum has led the development of A Case for Culture, an ambitious attempt to bring cultural organisations, the education sector and businesses together in stating a collective vision of how the region's cultural infrastructure should develop.[66]

However, regional Bridge organisations indicate that awareness of the LCEPs among museums is still low and that more must be done to explain how museums can benefit and get involved. There is concern on all sides that LCEPs should develop an inclusive ethos which embraces the major players, but also recognises the contribution of smaller museums and makes allowance for their more limited capacity.

63 Examples include: Jones, Beverly, *School and Academy Engagement with Museums across Bedford, central Bedfordshire, Essex, Hertfordshire, Luton, Thurrock, South End and North Kent*, Royal Opera House Bridge, 2012; May, Katy, *Museums & heritage sector: Working with children, young people and schools*, Curious Minds, April 2013; Clarke, Ruth, *Museums, galleries and education research paper*, A New Direction, 2015

64 Harland, J, Sharp, C, *Cultural Education Partnerships (England) Pilot Study*, National Foundation for Educational Research, 2015 www.artscouncil.org.uk/sites/default/files/download-file/Cultural_Education_Partnerships_Pilot_Study.pdf

65 www.ourfuturecity.org.uk

66 www.case4culture.org.uk

7. What are the barriers and enablers of delivering and sustaining a high quality formal learning offer? continued

Forging local partnerships to work with schools Islington Museum with the British Postal Museum and Archive, the Estorick Collection of Modern Italian Art, All Change, Cubitt and the Orchestra of the Age of Enlightenment

"Wunderkammer", or cabinets of curiosities, were the precursor of the modern museum. This project involved museums working with arts organisations, secondary school students and artists to re-discover the awe and wonder with which the earliest museum collections were originally viewed.

So, for example, one group of students from St Mary Magdalene Academy worked with musicians from the Orchestra of the Age of Enlightenment to create improvised sound pieces that told the story of objects in Islington Museum's collection, from a medieval monastery tile to a suffragette badge. In effect, they created a sonic wunderkammer.

This creative cross-fertilisation between some of London's smaller museums and arts organisations has led to a more integrated offer for local schools and encouraged fresh thinking about how collections can be used and interpreted.

https://friendsofim.com/wunderkammer/

Recommendation

8. Championing and joining up opportunities for professional development and debate

There are numerous sources of professional development for museum educators, including professional membership organisations, MDOs, Bridge organisations and the peer learning generated by national/regional partnerships. But budgetary and workload pressures mean that CPD can be difficult to access; it is not always systematically promoted and joined up; and formal learning is often overlooked for discussion at mainstream conferences.

Senior leadership within museums must champion professional development opportunities for the staff who work with schools and reignite the national debate about formal learning in museums. At the same time professional development bodies should explore how joint delivery of programmes might assist in making CPD for museum educators more strategic, affordable and inclusive.

Recommendation

9. Advocating for formal learning in museums as a core aspect of cultural entitlement

Stronger collective advocacy for formal learning in museums is needed to assert the place of museums in the cultural education agenda and promote the distinctive benefits of learning in museums to the education sector (DfE, Ofsted, etc).

Consideration should be given to the development of a national advocacy campaign, spearheaded by leading figures in museums and the media, alongside efforts to ensure that museums of all types and sizes can play their part in Local Cultural Education Partnerships and respond to the policy expectations and opportunities set out in the recent Culture and Education White Papers.

8. Conclusion

The wealth of insight, opinion and evidence offered in the course of this review bears witness to the enormous dedication of the education workforce in museums. But perhaps it also indicates that formal learning in museums has been eclipsed by more fashionable (although no less important) agendas relating to family learning, community development and health and well-being. It is clear that museum educators would like to begin, or pick up again, a national conversation about how they can work more effectively with schools, for they appreciate that at a time of rapid change we need to influence rather than merely respond to the course of events.

> Talk about it [formal education] in an exciting way. No one talks about schools and colleges – they are out of fashion. Other programmes are championed now.
>
> *University museum, North West*
>
> [We need a] national campaign aimed at [encouraging] schools to visit museums (not just the big nationals).
>
> *Local authority museum, South East*

Of course it is important to acknowledge the many crossovers that exist between formal and informal learning, and the influence of the wider family unit on how children learn. Some museums recognise this through out-of-hours projects that support transition from primary to secondary school or passport schemes that encourage children and young people and their families to visit museums during weekends and school holidays. But the fact remains that many children and young people will never have contact with museums and other cultural organisations unless they do so in the course of the school day and at the instigation of teachers. That is why formal learning in museums matters.

Much in the current situation could be improved or built on. Museum educators who contributed to this research would like the distinctiveness of what they do better recognised within the discourse that surrounds arts funding. They want to understand the education sector better and advocate more persuasively to it, with help from the other agencies charged with developing cultural education. They would welcome more opportunity to collaborate with teachers, support the skills of the teaching workforce and champion areas of the curriculum they care about. They are eager to learn from their peers and get better at evaluation and research. They want to build on some of the positive things that have happened in recent years, particularly the place-based curricula, digital initiatives and national/regional partnerships that propel museums into the frontline of learning. And they understand the need to become more entrepreneurial in the way they organise their services.

Perhaps the single biggest theme to emerge from our review is the need for greater connectivity within the world of museum education and a stronger collective voice. At the same time museum educators point out that integration and advocacy need to be facilitated and resourced if they are to become more than a vague aspiration. They remain worried about the background threat in many places to the collections that provide the rationale for all museum learning and the pressures within our education system that militate against taking children and young people out of school. It is difficult for both sides in this relationship to make the necessary investment of effort, time and money against a backdrop of cuts in public expenditure and a process of educational reform that has accelerated with the publication of the recent schools White Paper, *Educational Excellence Everywhere*.

8. Conclusion continued

Main features of Educational Excellence Everywhere: the schools White Paper, 2016

- Emphasis on outcomes rather than methods
- More autonomy for schools and a limited role for local authorities
- New National Teaching Service and an independent College of Teaching (like the Royal College of Surgeons)
- Stronger core content for ITT, which will remain in the hands of the best teaching schools and higher educational institutions
- Continued support for the work of the Education Endowment Foundation
- Better governance
- Roll out of academies programme to encompass all schools, including primaries, by 2020
- More support for "character and resilience" education, including an action plan for personal, social and health education
- New "fair" national funding formula for schools
- Continued support for pupil premium

In this situation it would be easy for schools to turn their backs on learning outside the classroom and for museums to accept a diminished role in our education sector. But if culture is, in the former Prime Minister's words, "a birth right that belongs to us all", then schools are the places that offer us the best hope of extending that right to as many children as possible. By investing in the quality and reach of formal learning in museums, we are also nurturing the historians, scientists, cultural producers and – a crucial consideration for museums themselves – the audiences of the future. At this pivotal moment for museums and schools, we hope the analysis and recommendations contained in our report will provide a springboard for action and, further down the line, a reference point for measuring how far we have come.

Appendix One: People and organisations consulted

Claire Ackroyd, Learning Manager, Bradford Museums and Galleries
Shanta Amdurer, Secondary teacher, Oak Lodge School
Jane Avison, Heritage Learning Business Manager, Heritage Learning, Hull
Sophie Baczynski, Development Manager, The Mighty Creatives, East Midlands Bridge
Janita Bagshawe, Director, Royal Pavilion and Head of Museums and Arts, Brighton and Hove City Council
Tony Berry, Visitor Experience Director, The National Trust
Karen Birch, Acting Chief Executive, The Mighty Creatives, East Midlands Bridge
Jenny Blay, Head of Museum Learning, The Langley Academy
Gill Brailey, Cultural Services Learning Manager, Lancashire County Council
Jane Bryant, Chief Executive, Artswork
Zoe Burkett, Education and Outreach Officer, Penlee House Gallery and Museum
Tony Butler, Excutive Director, Derby Museums Trust
Sam Cairns, Cultural Learning Alliance
Rebecca Campbell-Gay, Education Officer, Islington Museum
Sarah Carr, Museum Development Manager, North East
Jeremy Clarke, Education Officer, Guildhall Museum, Rochester
Jenny Cox, Primary teacher, Leeds College of Art
Rachael Crofts, Museum Development Officer (Audiences), London
Rosie Crook, Museum Development Officer (Audiences), North West
Nicholas Cullinan, Director, National Portrait Gallery
Niall Deegan, Secondary teacher, Woodlane High School
Liz Denton, Museum Development Officer, East Yorkshire and Northern Lincolnshire
Melanie Derrick, Secondary teacher, Walworth Academy
Justin Dillon, Professor of Science and Environmental Education & Head of School Graduate School of Education, University of Bristol
Holly Donagh, Partnerships Director, A New Direction (A.N.D.), London Bridge
Richard Evans, Director/CEO, Beamish Museum
Ciaran Flanagan, Secondary teacher, Eastbury Community School
Andrew Fowles,Learning Manager, Birmingham Museums Trust
Ben Frimet, Secondary teacher, The City of London Academy
Susan Goodwin, Associate Director, Culture Sector Partnerships Arts Connect, West Midlands Bridge
Peter Gregory, Principal Lecturer in Education (Creative Arts), Canterbury Christ Church University
Bill Griffiths, Head of Programmes/Regional Manager Culture Bridge North East Tyne and Wear Archives & Museums
Jean-Paulo Guilherme, Secondary teacher, Eastbury Community School
Yolanda Guns, Secondary teacher, Chingford Academies Trust
Robin Hanley, Head of Operations and Learning, Norfolk Museums
Vic Harding, Programme Manager, South West Museum Development
Stephanie Hawke, Partnerships and Development Coordinator: Schools and Heritage, Curious Minds, North West Bridge
Sharon Heal, Director, Museums Association
Samantha Heal, Primary teacher, Chapel Allerton Primary School
Fiona Heath, Primary teacher, Norfolk Community Primary School
Chloe Hughes, Community Engagement Officer, Cornwall Museums Partnership
John Hunter, Secondary teacher, Chingford Academies Trust
Rebecca Hunter, Secondary teacher, Eastbury Community School
Davey Ivens, Specialist Consultant (Engaging Children and Young People), East Midlands Museum Development

Appendix One: People and organisations consulted continued

Claire Johnson, Primary teacher, Chapel Allerton Primary School
Baljit Kaur Bains, Primary teacher, Farnham Primary School
David Keen, Access Development Manager, Royal Air Force Museum
Rachel Kerr, Project Coordinator (100 Objects That Made Kent), Guildhall Museum, Rochester
Lindsey King, Primary teacher, Kippax Ash Tree Primary School
Helen Langley, Primary teacher, Methley Primary School
Kelly Lean, Research and Development Manager, Royal Opera House Bridge (Essex, Hertfordshire, Bedfordshire and North Kent)
Devon Masarati, Secondary teacher, Virgo Fidelis Convent Senior School
Ellen McAdam, Director, Birmingham Museums Trust
Philip Miles, Museum Manager, Sheringham Museum
Jess Miller, Primary teacher, Shire Oak Primary School
Steve Miller, Head of Service, Norfolk Museums Service
Kathryn Moore, Museum Development Project Officer, SHARE Museums East
Elizabeth Neathey, Museum Development Officer (Bath, North East Somerset and Swindon)
Tamalie Newbery, Executive Director, Association of Independent Museums
Julia Nzimi, Secondary teacher, Evelyn Grace Academy
Irene Obalim, Secondary teacher, Westminster Academy
Kate Oliver, Schools Learning Manager, Horniman Museum
Natasha Osborn, Primary teacher, All Saint's Richmond Hill Church of England Primary School
Emily Paul, Secondary teacher, Eastbury Community School
Fran Piacentini, Learning Officer, Museum of Brands and Packaging
Emily Pringle, Head of Learning Practice and Research, Tate
Jo Reilly, Head of Participation and Learning, Heritage Lottery Fund
Ruth Schofield, Primary teacher, Chapel Allerton Primary School
Pollie Shorthouse, Executive Director, National Centre for Citizenship and the Law
Jane Sillis, Director, engage
Cathy Silmon, Learning Officer, Chiltern Open Air Museum
Caroline Smith, Education and Outreach Officer, Bethlem Museum of the Mind
Clare Smith, Project Manager, Learning Innovations Team, Tyne and Wear Archives and Museums
Tamzyn Smith, Specialist Consultant, Real Ideas, South West Bridge
Miranda Stearn, Head of Learning, The Fitzwilliam Museum, University of Cambridge
John Stevenson, Director, Group for Education in Museums
Roxanne Stewart, Primary teacher, Mill Field Primary School
Janet Stott, Head of Public Engagement, Oxford University Museum of Natural History
Frazer Swift, Head of Learning, Museum of London
Matthew Tanner, Chief Executive, SS Great Britain Trust
Peter Taylor, Strategic Manager, Hants, Portsmouth, So'ton & IoW, Artswork, South East Bridge
Ruth Taylor, Strategic Manager, Artswork, South East Bridge
Stuart Tiffany, Primary teacher, Farsley Farfield Primary School
Michael Turnpenny, Museum Development Manager, South Yorkshire
Helen Whitehorn, Secondary teacher, Bexley Grammar School
Joff Whitten, Programme Manager, Festival Bridge (Norfolk and Suffolk)
Cara Williams, Schools Programme Manager, V&A Museum
Fiona Williams, Secondary teacher, Lilian Baylis School

Appendix Two: Data tables

Online survey: design and distribution

An online survey was distributed between 9 and 29 February 2016 with the help of GEM, engage, the Museums Association, AIM, the Cultural Learning Alliance, National Museum Directors' Council, Museum Development Officers and the Bridge organisations. It was also sent directly to Major Partner Museums and promoted on social media. A pilot version of the survey was tested by museum educators taking part in the Museums and Schools programme and several questions were subsequently amended.

The survey invited an organisational perspective on formal learning in museums and was aimed at accredited museums or museums working towards accreditation. It attracted 260 responses from 247 organisations, i.e. not far short of 1 in 5 museums. Breaking down our respondents by type of museum and comparing this with accreditation data, our sample can be seen to be broadly representative of the sector, with a slight over-representation of university and national museums.

Survey sample compared with accreditation data (on left)

England			Survey		
Local Authority	**374**	**29%**	**Local Authority**	**70**	**34%**
Independent	629	48%	Independent	59	29%
Independent: National Trust	125	10%	Independent trust (supported by local authority)	31	15%
			Volunteer-run	18	9%
Total Independent:	**754**	**57%**	**Total Independent:**	**108**	**52%**
Military	**51**	**4%**	**Regimental or armoury**	**8**	**4%**
University	**55**	**4%**	**University**	**13**	**6%**
National Museum	**44**	**3%**	**National**	**26**	**13%**
English Heritage	**34**	**3%**			
			Other	**14**	**7%**
TOTAL	**1312**	**100%**	**Total (respondents to question)**	**207**	

The free-text responses that were offered alongside many questions have given us a means of interpreting the quantitative data and have been used to inform the analysis below. We have also indicated where geography (i.e. including urban or rural location), size, and type of museum have produced a significant variation in response.

As always, there were areas where the survey could have delved more deeply. But we wanted to achieve a balance between maximising the number of people who would complete the survey and the depth or quality of their response.

Appendix Two: Data tables continued

Focus groups

Focus group discussions with teachers took place in Leeds (primary) and London (secondary) on 2 and 9 March 2016 respectively.

Two primary school teachers had a History specialism, two a specialism or responsibility for arts and the rest had no specialist subject area. Participants ranged from newly qualified to established classroom to Assistant Head teacher. Participants in the secondary focus group came from a range of subject areas, including Science, History, Art and Design, SEND, Modern Foreign Languages, Citizenship and Geography. Two were also Arts Award Coordinators.

There was a high degree of correlation between the two sets of responses, even although the teachers were from different places and phases of education.

Nine museum educators, from a range of museums, took part in a focus group for "learning leads" on 8 March (see Appendix One for list of attendees). Supplementary phone calls were also made to colleagues who would have liked to attend this focus group, but were otherwise committed on the day.

1. What is the current offer of formal learning delivered by museums?

Services, resources and facilities

Museums appear to be offering a well-rounded service and know what they should be doing or would like to do, even if they don't always have the resources to do it. Nearly all offer facilitated visits (96 per cent) and self-directed visits (83 per cent), with high percentages also offering generic risk assessments, outreach, learning resources and teacher CPD. As many as 50 per cent of respondents still provide a loans service. Larger museums were more likely to offer a comprehensive service.

Teachers confirm that they want wrap-around resources that can be used before, during and after museum visits. Primary teachers welcome thematic opportunities that can sustain or feed into a whole term's work. The option of outreach is also very appealing for all teachers: one secondary SEND teacher was delighted that her local museum offers a whole "in school" outreach week.

Off-the-shelf risk assessments are helpful and it appears that they now need to mention measures for dealing with a terrorist threat.

Although our survey didn't ask about opening hours, the value of flexibility came up in discussion with teachers, especially at secondary level – for example, weekend or evening opening would support pupils' independent visits.

Teachers have high expectations. They want a stimulating, seamless experience, delivered by staff who are appropriately knowledgeable and skilled at dealing with children and young people. Clearly smaller museums with volunteer staff may struggle to meet these expectations and will need more support from the sector's lead bodies in raising their level of educational expertise. GEM's new CPD scheme and competency framework will go some way towards fulfilling this need.

Q3. Please indicate which of the following services, resources and facilities your museum offers as part of its formal learning provision?

	%	Num
Facilitated visits (e.g. workshops, handling sessions, role play etc.)	96%	243
Self-directed visits	83%	210
Generic risk assessments	77%	195
Outreach sessions	71%	179
Learning resources (e.g. lesson plans, activity packs etc.)	67%	169
Professional development for teachers (e.g. twilight sessions, TeachMeets etc.)	54%	136
Loan collections	50%	127
All Respondents	100%	242

Note: where percentages in tables add up to more than 100 per cent this is due to respondents being able to tick more than one answer.

Arts Award and Artsmark

Over 60 per cent of respondents were involved with Arts Award or Artsmark, with a slightly lower percentage (51 per cent) in the independent sector likely to be involved. Not surprisingly, galleries or museums with galleries were more likely to be involved.

Appendix Two: Data tables continued

Responses suggest that museum education staff have embraced Arts Award and Artsmark enthusiastically, although some express reservations about its perceived emphasis on art and artists as opposed to heritage. Many reported that they and colleagues are trained Arts Award advisers, some mentioned incorporating after-school and summer clubs and several were involved with piloting Arts Award for younger age-groups.

Q4. Does your museum currently support the Arts Award (for Children & Young People) and Artsmark Award (for schools) programmes in any of the following ways?

	%	Num
Registered as an "Arts Award Supporter"	36%	87
We are an active "Arts Award Centre"	23%	57
Registered as an "Artsmark Supporter"	6%	15
Support in other ways	23%	57
None	39%	95
All Respondents	**100%**	**243**

Curriculum

History, Art, English and Science are, in that order, the areas of the curriculum mostly likely to feature in museums' learning offer to schools. Geography, Design and Technology, Citizenship and Personal Social and Health Education are also well represented.

By some way, History is the subject in which demand is clearly increasing, followed by Science and English. There is less evidence of increased demand in Art, owing perhaps to its diminished status in the new curriculum. There appeared to be less overall fluctuation in demand in the independent museum sector.

Many respondents noted that their offer is fundamentally cross-curricular and is marketed as such. Other subjects offered by some museums are Drama, Engineering, Computing, Leisure and Tourism, Outdoor Learning and Religious Education. "British Values" and Spiritual, Moral, Social and Cultural Education are a new area of the curriculum where many museums feel they have a great deal to offer.

Teachers want the educational relevance of museum learning clearly explained in marketing materials, if only to justify a museum visit to their senior leadership team. But although curriculum links are important to them, they also recognise the wider motivational, social and behavioural benefits of learning in museums. They spoke of the "wow" factor that links to the curriculum, but is not limited by it. Words like "curiosity", "wonder" and "awe" featured in their comments; they described museums as a place where learning takes place by stealth or "undercover"; they even saw "happiness" as an important potential outcome of learning in the experiential environment of the museum. One teacher said it would be sad if museums felt they had to adopt the language of "expected standards".

Q5. Please indicate which of the following curriculum areas you...

...currently market as part of your formal learning offer?

....you are currently experiencing increased demand from schools?

	Offer		Demand	
	%	Num	%	Num
History	95%	225	35%	84
Art	66%	156	11%	26
English (including literacy)	60%	143	14%	33
Science	56%	134	21%	50
Geography	39%	93	7%	17
Design & Technology	38%	91	6%	14
Maths	28%	66	4%	10
Citizenship	26%	63	4%	9
Personal, Social and Health Education	22%	52	3%	8
Music	10%	23	0%	0
Computing	5%	11	3%	7
Languages	3%	8	1%	3
Physical Education	3%	7	0%	0
Other	12%	29	3%	8
None	1%	3	0%	1
All Respondents	100%	238	100%	238

Appendix Two: Data tables continued

Digital technology

This was the area of our consultation that elicited the most conflicted response, as museum educators and teachers sought to reconcile their attachment to real objects (as one person put it, 'real objects, real experiences, fire and knives') with the knowledge that children and young people today are "digital natives".

Museum educators were broadly sympathetic to the use of digital technology as a marketing and interpretive tool. Yet a surprising 31 per cent of respondents did not appear to think that online booking systems would be an advantage. Teachers, on the other hand, were clear that they want booking procedures to be easy and intuitive.

A few respondents could see no place at all for digital technology in their programmes and it was clear that some smaller museums with a largely voluntary workforce simply lack the capacity to engage with it. Several people talked about budgetary limitations. Others pointed out that they have cupboards full of superannuated equipment and that schools are much better able to keep their "kit" up-to-date. An even bigger problem is the absence or patchiness of internet access, especially in rural locations.

Nevertheless respondents used the survey's free-text boxes to talk enthusiastically about a wide range of ways in which digital technology is being used in their museum to create a "blended" learning experience. Examples included digital animation workshops, activities involving iPads and iPhones (or similar), interactive touch screens, augmented reality, audio-links to SoundCloud and Skype Q and As with experts. On occasion digital technology is giving help to people with special needs – for example, special apps for young people with learning disabilities and a talking pen for visually impaired pupils and adults. One larger museum was working with a MOOC (Massive Open Online Course) to deliver a web-based course. Several people said they would like to know more about 3-D printing.

Teachers recognised that the novelty of museums is the "hands on" experience of real objects and contact with experts whose expertise can augment their own. They were sometimes concerned about issues of internet safety. But they felt strongly that there is a place for interactive digital resources that can be used before, during (if appropriate) and after a museum visit to enhance their pupils' enjoyment and learning. They liked the idea of digital "teaser" campaigns, in the form of soundbites and video demonstrations that could be delivered direct to a whiteboard. They talked about the creation of a shared digital space where conversations and interactions could take place and would welcome opportunities for co-curation, for example on social media platforms such as Pinterest. Just as important, however, are high-quality, downloadable primary source materials from archives, including images focused on the local area to the school.

Q6. How are you using (or planning to use) digital technology in your formal learning provision?

	Currently offered	Currently planning/ developing	Desirable	Not desirable	All Respondents
As marketing and communications tool	72%	12%	15%	1%	225
As educational element in displays and exhibitions	46%	27%	21%	6%	224
For pre and post learning resources	40%	25%	33%	3%	215
For online bookings	18%	16%	35%	31%	217
For digital trails and games	15%	24%	46%	14%	208

Appendix Two: Data tables continued

Q7. Which of the following are currently available (or planned) as part of your digital offer?

	Currently offered	Currently planning/ developing	Desirable	Not desirable	All Respondents
Internet access in education spaces	51%	11%	26%	13%	203
Internet access in gallery spaces	45%	15%	27%	13%	214
Computers in gallery spaces	33%	10%	24%	33%	198
Interactive whiteboard	29%	4%	29%	38%	205
iPads (or similar) for individual use	23%	13%	42%	21%	205
Computers in education spaces	22%	8%	33%	36%	198

Q8. For what purposes do you collect the following data about the schools accessing your formal learning provision?

	Collected	For routine internal monitoring	To meet external requirements	For other purpose
Internet access in education spaces	51%	11%	26%	13%
Internet access in gallery spaces	45%	15%	27%	13%
Computers in gallery spaces	33%	10%	24%	33%
Interactive whiteboard	29%	4%	29%	38%
iPads (or similar) for individual use	23%	13%	42%	21%
Computers in education spaces	22%	8%	33%	36%

All respondents: 224

Data: what museums collect and why

Nearly all museums collect data about schools visits for the purposes of routine internal monitoring and sometimes also to satisfy the requirements of an external funder. The main categories of information captured relate to the name and location of school, number of pupils and phase/type of education including SEND. However, it appears that smaller museums lack the capacity to analyse data relating to the socio-economic profile of schools and their pupils, including ESOL. Our survey did not ask museums whether they monitor geographic reach or distinguish between new and repeat visits. Participants in our focus group for learning leads felt keenly the lack of a consistent collective approach to data collection and recommended that funders give this attention.

Phases of education

The great majority of school visits to museums are still, as they always have been, from the primary sector. Ninety-seven per cent of respondents said that primary schools represent a large proportion or nearly all their visits; only 20 per cent said the same of secondary schools. Post-sixteen visits are comparatively rare and SEND and PRU groups are a small but significant part of the overall market.

Although 23 per cent of respondents have seen a decrease in the number of school visits over the past few years, 49 per cent (more than twice as many) report an increase. However, there are significant regional disparities. 27 per cent of museums in the North or Midlands report a decrease and 45 per cent an increase in school visits, compared with 17 per cent and 55 per cent in the South.

Appendix Two: Data tables continued

Twenty-eight per cent of galleries or museums with galleries register a decrease in schools visits and 46 per cent an increase.

In most museums the primary/secondary balance has stayed the same, but 19 per cent of respondents have seen a shift in favour of primary education. Small museums (those with an annual budget of less than £500,000) appear to have noticed less fluctuation in the overall pattern of visits.

Teachers in our focus groups indicated that budgets and timetables are under more pressure than before. But as enthusiastic users of museums, they do not allow this to deter them from taking their pupils out of school.

9. What proportion of pupils accessing your formal learning provision are from the phases and types of school listed below?

	All/nearly all	Large proportion	Small proportion	Hardly any	None	Don't know	All Respondents
Primary	42%	55%	2%	0%	0%	1%	230
Secondary	1%	19%	51%	25%	3%	1%	228
Post 16	0%	8%	47%	37%	6%	1%	219
Special Schools/ Classes (SEND)	0%	6%	61%	26%	4%	3%	223
Pupil Referral Units (PRU)	0%	2%	22%	38%	29%	8%	215
Computers in education spaces	22%	8%	33%	36%	33%	36%	198

Q10. How has the number and type of schools accessing your formal learning provision changed?

In the last three years – the number has...	%	Num
Significantly increased	15%	33
Increased	34%	76
Stayed the same	26%	59
Decreased	20%	46
Significantly decreased	3%	6
Not offered	0%	1
Don't know	2%	4
All Respondents	100%	225

In the last three years – the balance has...	%	Num
Shifted significantly towards primary	8%	18
Shifted towards primary	11%	23
Stayed the same	70%	152
Shifted towards secondary	7%	16
Don't know	4%	9
All Respondents	100%	218

2. How do museums and schools assess the quality of the offer?

Planning and assessment

Museums are using various tools and frameworks to plan and evaluate formal learning provision, often customising existing guidance (e.g. ILFA, GLOs, Arts Council Quality Principles) to devise a methodology that suits their own situation. Ninety-one per cent reported that they use their own in-house questionnaire; 39% consult regular focus or advisory groups; 38% use ILFA; 28% use the Arts Council quality principles; 28% use the Sandford Award criteria and 27% use Learning outside the Classroom indicators.

In this varied landscape it is often larger museums that have the resources to experiment. One national museum reported that it is working with a social scientist to devise its own evaluation framework; another has a dedicated audience research team.

Appendix Two: Data tables continued

Smaller museums frequently use Survey Monkey questionnaires post-visit, as well as traditional methods such as informal feedback and visitors' books. One respondent pointed out that the ultimate test is whether schools vote with their feet – an observation echoed by the secondary teacher in our focus group who simply asked 'Would we go back [to the museum]?'

Fifty-nine per cent of respondents involve children and young people in the planning and assessment process; 38% do not. Those who do employ a wide variety of methods, including stickers, post-it notes, postcards, letters, pictures, mood boards and questionnaires. Talking and listening, for example in a plenary session, are felt to be very important. One museum uses child-friendly methods such as standing on a "confidence lines" to see whether perceptions of the topic/museum have changed. Many museums work with youth panels, curators and advocates and pilot new activities with groups of children and young people.

Over the past three years 63 per cent of respondents said that approaches to planning and assessment have changed, under the impact of the new curriculum. Encouragingly, many people said that this has forced them to work more closely with teachers to review the content and format of their formal learning programme.

Teachers were less likely than museums to carry out a formal post-visit evaluation, perhaps because the museum does this for them anyway and once back at school they have little time. However, during and after visits they look out for changes in behaviour and motivation: they used words like "enthusiasm", "engagement", "excitement", "inspiration" and "enjoyment" to describe the impact of museums on their pupils. To justify a trip in the first place, they may stress curriculum links and learning objectives to their Senior Leadership Team. But there is little evidence that "learning impact" is formally measured in any way after the event. Life is in school is too busy and the beneficial effects of learning in museums are considered self-evident.

Q11. What tools or frameworks do you use to plan and assess the quality of your formal learning offer?

	%	Num
In-house questionnaire	91%	201
Regular focus or advisory groups	39%	87
Inspiring Learning for All	38%	85
Sandford Award criteria	28%	63
ACE quality principles for work by and with children and young people	28%	62
Learning Outside the Classroom indicators	27%	61
Culture Counts quality metrics	1%	2
None	5%	10
Other	26%	61
All Respondents	100%	233

Q12. How do you involve children and young people in evaluating your formal learning provision?

	%	Num
We involve them	59%	136
We don't currently do this	38%	89
Don't know	3%	7
All Respondents	100%	232

Appendix Two: Data tables continued

3. How are museums delivering, developing and resourcing formal learning provision?

Shift in balance of formal learning and other learning provision in past three years

Many respondents used the free-text boxes in our survey to elaborate on how the balance of formal learning versus other learning (adult, family, community etc.) has changed in the past three years.

The picture is mixed, with almost equal percentages registering a shift towards (22 per cent) and away (19 per cent) from formal learning. For some, budget cuts, curriculum changes and reductions in staffing had necessitated a downsizing of the service offered to schools or a stricter focus on schools to the exclusion of everything else. Some people said they were being asked to provide the same level of service ('all things to all people') with fewer resources.

Others reported that project funding from Arts Council England or HLF had enabled an expansion of their formal learning programme. In some places formal learning was also seen as an income stream and had assumed a new priority because of that.

Several respondents said that formal learning is less important than before, because it is easier to access external funding for informal learning (e.g. from the health sector).

14. How has the balance of formal learning and other learning provision changed over the past three years?

	%	Num
Shifted significantly towards formal (school)	8%	18
Shifted towards formal (school)	14%	31
Stayed the same	51%	114
Shifted towards other learning services	17%	39
Shifted significantly towards other learning services	2%	3
Don't know	8%	18
All Respondents	100%	233

	%	Num
Towards formal	22%	49
Stayed the same	51%	114
Towards other learning services	19%	42
Don't know	8%	18
All Respondents	100%	223

Change in FTE (full-time equivalent) staff resource and use of freelancers/volunteers

Twenty-four per cent of respondents had seen an increase in their FTE staff resource and 22 per cent a decrease. In several cases the increase was down to project funding and fixed-term (e.g. HLF funded) posts. The Museums and Schools programme had also made a significant difference in many places.

Others reported a sharp contraction in the size of their learning team, including in the administrative capacity that supports the programme. In some places the transition to a full-cost recovery model and/or successful external fundraising had protected staff from redundancy.

Appendix Two: Data tables continued

Several respondents reported that the question was irrelevant, since their museum is run entirely by volunteers.

Museums in the North and Midlands were more likely to have seen an increase in freelance staff than their counterparts in the South. This was also true of museums in urban areas. Galleries or museums with galleries were also more likely than museums to have increased their dependence on freelance staff. Museums in the South were more likely to have seen an increase in volunteers.

Q15. How has the FTE (full-time equivalent) staff resource for formal learning provision changed in the last three years?

	Significantly increased	Increased	Stayed the same	Decreased	Significantly decreased	Not offered	Do not know	All Respondents
Employed	3%	21%	47%	15%	7%	6%	1%	214
Freelance	3%	21%	31%	7%	4%	4%	30%	189
Voluntary	6%	32%	27%	8%	1%	23%	3%	208
Other	3%	17%	14%	3%	0%	43%	20%	35

Changes in how formal learning is resourced

Sixteen per cent of respondents said their budget for formal learning had increased and 31 per cent that it had decreased. Increases were often temporary and attributable to external funding, particularly from Arts Council England and HLF.

Some people reported that they are being asked to deliver more for the same budget or that they are working hard to achieve a break-even financial position. Several museums in the independent sector pointed out that they have never had much budget in the first place. One service expressed concern that the grant it receives from maintained schools will disappear when academisation is rolled out.

Access to CPD is limited ('I can't remember the last time I attended any course related to my role in Museums and Galleries') and people find it hard to take time away from the shop-floor.

Although some museums have upgraded their learning facilities through grants from HLF, just as many reported that space is under pressure for corporate hire and other money-making activities. Twenty-one per cent of respondents had seen an increase in the space available for formal learning and 10 per cent a decrease.

The good news is that 37 per cent of respondents thought that formal learning had become a higher priority over the past three years, even if only for reasons of income generation or because of external investment from HLF. However, many people stated that learning in all its forms is fundamental to their organisational mission. Anecdotally, there was little evidence that education staff are not party to policy-making decisions.

Behind the global figures, however, there are considerable variations between the North and Midlands and the South. Forty-two per cent of galleries and museums with galleries report that budgets have decreased, perhaps because many galleries are part of the civic infrastructure supported by hard-pressed local authorities.

Appendix Two: Data tables continued

Q16. How have the following aspects of formal learning provision changed in the last three years?

	Significantly increased	Increased	Stayed the same	Decreased	Significantly decreased	Not offered	Do not know	All Respondents
Priority in the organisation	11%	26%	50%	8%	3%	0%	2%	224
Investment in learning resources	7%	23%	39%	20%	5%	3%	2%	219
Space and facilities	7%	14%	66%	7%	3%	1%	2%	221
Budget	5%	11%	46%	22%	9%	4%	3%	223
Investment in CPD for museum staff	5%	17%	49%	14%	4%	5%	7%	217

External relationships that benefit formal learning

Responses to our survey show museums working and benefiting from a wide range of external partnerships in relation to CPD, research and programme delivery. In general larger museums were more widely networked.

GEM is the "go to" provider of professional development for a majority of museums (used by 74 per cent of respondents), with engage doing the same job for the world of galleries and the visual arts (28 per cent of all respondents, rising to 53 per cent of galleries). Museum Development Officers are widely relied on for training and elements of programme delivery (64 per cent of respondents) and often provide useful consultancy.

National museums, regional Bridge organisations and HE institutions also provide welcome support, although some people were not convinced that Bridge organisations fully understand museums. Thirty-five per cent of respondents have some kind of relationship with subject associations such as STEM Learning Centres and the National Society for Education in Art and Design.

Several respondents spoke warmly of Kids in Museums. And it is clear that many museums are very much involved with local networks, for example Surrey's Learning on my Doorstep, ERA in Cheshire, Gloucestershire Museums Group and Milton Keynes Creative Learning Network (to name only a few).

22 per cent of respondents said they have links with Initial Teacher Training although it is not clear what this consists of. A couple of people mentioned that they host regular ITT placements.

Appendix Two: Data tables continued

Q17. Does your formal learning provision benefit in any of these ways from the following organisations?

	Overall	Professional development	Programme delivery	Research and evaluation
Group for Education in Museum	74%	67%	14%	31%
Regional Museum Development training sessions	64%	62%	19%	15%
Regional Bridge Organisation	41%	35%	15%	17%
Courses run by national museums	39%	35%	8%	7%
Higher Education Institutions (eg Universities)	35%	15%	21%	18%
Subject associations and networks (e.g. STEM learning centres, NSEAD)	35%	20%	20%	13%
engage (the National Association for Gallery Education)	28%	23%	4%	11%
Teacher training providers	22%	10%	15%	4%
Regional Museum Federation	20%	18%	3%	3%
Museums and Schools action learning set	6%	4%	2%	4%

All respondents: 188

Income generation

Income generation is a priority for museums, with 64 per cent of respondents reporting that 'schools paying for services' contributes to their core income and 21 per cent describing income from schools as additional. HLF and trusts and foundations are the main sources of supplementary income (37 per cent and 24 per cent of respondents respectively). Local Education Authority funding accounts for only 3 per cent of "core" financial support.

A majority of respondents (52 per cent) said they have income targets and only 11 per cent said it had become easier to achieve them in the last three years. 53 per cent of respondents reported that it has become more difficult to increase income. It is not clear whether the increased difficulty of meeting targets relates to the targets themselves being raised. Independent museums are more likely to have income generation targets in the first place.

19. Does your museum have income targets for its services to schools?

	%	Num
Yes	52%	117
No	44%	99
Don't know	4%	9
All Respondents	**100%**	**225**

20. Over the last three years would you say that meeting your income target has become more or less difficult?

	%	Num
Much easier	3%	4
A little easier	8%	9
About the same	30%	35
A little more difficult	33%	38
A lot more difficult	20%	23
Don't know	5%	6
All Respondents	**100%**	**115**

Appendix Two: Data tables continued

18. How is your formal learning provision funded

	Core funding	Additional funding
Schools paying for services	64%	21%
Local Authority	35%	6%
Trusts and Foundations	10%	24%
Arts Council England	8%	29%
Department for Culture, Media and Sport	8%	1%
Heritage Lottery Fund	6%	37%
Local Education Authority	3%	1%
Local business	1%	7%
National business or corporation	1%	2%
Nesta	0%	1%
Department for Education	0%	3%
Other	11%	5%

All respondents: 217

4. What are the barriers and enablers of delivering and sustaining a high quality formal learning offer?

Teachers in our focus groups made it clear that they want tailored experiences that offer curricular and, ideally, cross-curricular benefit. They need help with their own internal advocacy to the Senior Leadership Team, so value promotional materials that explain the offer clearly, including SEND and early years provision and public transport links.

At both primary and secondary level teachers see the value of long-term relationships. They would welcome secondments ('It's a partnership. We learn from museums and museums learn from us!') and like the idea of clusters of schools jointly commissioning programmes of activity.

Secondary teachers want access to experts – for example artists and scientists – who can add something to their own subject-knowledge. Opportunities to develop and celebrate their pupils' work were considered important, as was the extension of opening hours to facilitate independent study.

Transport remains their biggest challenge, as it is costly in most places outside London, unless museums manage to negotiate discounts with local bus companies. Schools in London are fortunate in having access to Transport for London's free travel for school groups. Outreach offers one way round the transport problem, but has resource implications for museums. Teachers also recognise the value of stepping outside the classroom and entering a different environment.

Museums report that teachers have become more discriminating and/or demanding. They are bringing larger groups, but expect the same level of input and impact. Some respondents have seen a falling-off in the number of schools using their services as a result of budget pressures and change in the curriculum. But many find that a lively and relevant offer, supported by good communications and resources, continues to attract and satisfy local schools.

Appendix Three: Routes to initial teacher training

Routes to initial teacher training	
PGCE (post-graduate certificate in education)	Courses have been reduced in many places, but a PGCE still offers a programme in which trainees spend a proportion of their time at university engaged in theoretical learning as well as (normally) two placements at contrasting schools.
School Direct	Schools work in partnership with a higher education provider to offer salaried and unsalaried positions depending on subject shortages within their "cluster" and national priorities. Trainees are allocated to a school within the partnership and spend much of their year working there. They will access a second placement at a different school in the partnership, but for less time than on a PGCE. They receive additional training from the university, but spend much more time in school. They leave with a Qualified Teacher Status (QTS) qualification, but many also offer the PGCE.
SCITT (school-centred initial teacher training)	A SCITT is generally set up within a Teaching School Alliance, with the teaching school as the lead. There is no requirement that a SCITT works in partnership with a university, and it's the SCITT rather than the university that recommends the trainee for QTS to the secretary of state.
Assessment only	This is a less well known route and involves a trainee who has significant experience of working in school (a Higher Level Teaching Assistant) for example, producing a portfolio of evidence that shows they meet the teaching standards. This evidence is assessed and a candidate can be offered QTS.
Teach First	Recruits talented graduates for an intensive six-week training, followed by two years learning on the job. At the same time participants complete a Leadership Development Programme which involves achievement of a PGCE and QTS in year one, and access to a range of training and development across the two years to help them become effective teachers and leaders. Trainees learn to teach by working in a challenging school in a low-income community.

Appendix Four: Bibliography

Publications

(All web references accessed June 2016)

Anderson, David, *A Common Wealth: Museums in the Learning Age*, Department for Culture, Media and Sport, 1991 (first edition 1997)

Arts and Cultural Education in School Inspection Reports, SQW, Arts Council England, 2015 (unpublished) <www.sqw.co.uk/about-us/latest-news1/are-good-schools-associated-with-high-quality-provision-in-particular-subjects/>

BritainThinks, *Public perceptions of – and attitudes to – the purposes of museums in society*, Museums Association, March 2013 <www.museumsassociation.org/download?id=954916>

Cairns, Sam, *Thinkpiece for Future of Museum Learning for Children and Young People Enquiry*, Arts Council England, July 2013

Carter, Andrew, *Carter Review of Initial Teacher Training (ITT)*, Department for Education, January 2015 <www.gov.uk/government/uploads/system/uploads/attachment_data/file/399957/Carter_Review.pdf>

Carruthers, Judith, Children, Young People and Museums, Royal Opera House Bridge, October 2012 <http://static.roh.org.uk/learning/bridge/documents/Children-Young-People-and-Museums-2012-summary.pdf>

Coles, Alec, 'Museum Learning: Not instrumental enough?', in *Learning to Live: Museums, young people and education*, Institute for Public Policy Research and National Museum Directors' Conference, 2009 <www.nationalmuseums.org.uk/media/documents/publications/learning_to_live.pdf>

Correia, C (King's College London), Dillon, J (University of Bristol), *An Evaluation of 'Stronger Together': A Museum Learning Partnership Development Project*, The Langley Academy, April 2015 <www.langleyacademy.org/strongertogether/wp-content/uploads/2015/06/Stronger-Together-Evaluation-Final-Report-KCL.pdf>

Clarke, Ruth, *Museums, galleries and education research paper 2015*, A New Direction (internal research paper)

Crossick, G, Kaszynska, P, *Understanding the value of arts and culture: The AHRC Cultural Value Project*, AHRC, March 2016 <www.ahrc.ac.uk/documents/publications/cultural-value-project-final-report/>

DeWitt, J, Osborne, J, 'Supporting Teachers on Science focused School Trips: Towards an integrated framework of theory and practice', *International Journal of Science Education*, May 2007

Dillon, J et al, *Learning Research Agenda for Natural History Institutions*, Natural History Museum, 2016

<www.nhm.ac.uk/about-us/visitor-research-evaluation/learning-research-seminars.html>

Doeser, James, *Step by step: arts policy and young people 1944-2014*, King's College London, January 2015 <www.kcl.ac.uk/Cultural/culturalenquiries/youngpeople/Step-by-step.pdf>

Educational Excellence Everywhere, Department for Education, March 2016 <www.gov.uk/government/uploads/system/uploads/attachment_data/file/508447/Educational_Excellence_Everywhere.pdf>

Enriching Britain: Culture, Creativity and Growth, The 2015 Report by the Warwick Commission on the Future of Cultural Value, The University of Warwick, 2015 <www2.warwick.ac.uk/research/warwickcommission/futureculture/finalreport/warwick_commission_final_report.pdf>

Foreman-Peck, L, Travers, K, *What is distinctive about museum pedagogy and how can museums best support learning in schools?* An action research inquiry into the practice of three regional museums, Educational Action Research, March 2013

Harland, J, Sharp, C, *Cultural Education Partnerships (England) Pilot Study*, National Foundation for Educational Research, 2015 <www.artscouncil.org.uk/sites/default/files/download-file/Cultural_Education_Partnerships_Pilot_Study.pdf>

Hawke, Steph, *Museums and Heritage Agent Reports SWOT Analysis*, Curious Minds, 10 December 2013 (internal research paper)

Henley, Darren, *Cultural Education in England*, Department for Culture, Media and Sport and Department for Education, 2012 <www.gov.uk/government/uploads/system/uploads/attachment_data/file/260726/Cultural_Education_report.pdf>

Henley, Darren, *Cultural Education A summary of programmes and opportunities*, Department for Culture, Media and Sport and Department for Education, July 2013 <www.gov.uk/government/uploads/system/uploads/attachment_data/file/226569/Cultural-Education.pdf>

Appendix Four: Bibliography continued

Heritage Schools – End of Project Evaluation, Qa Research, Historic England, September 2015 <http://content.historicengland.org.uk/content/docs/education/heritage-schools-evaluation-report.pdf>

Hooper-Greenhill, Eileen, *Museums and Education: Purpose, Pedagogy, Performance*, 2007

Hudson, Maria, *Casualisation and Low Pay: Report for the TUC*, Trades Union Congress, April 2014

Hutchings, Merryn, *Exam Factories? The impact of accountability measures on children and young people*, National Union of Teachers, June 2015 <www.teachers.org.uk/files/exam-factories.pdf>

ImagineNation, The Case for Cultural Learning, Cultural Learning Alliance, 2011 <www.culturallearningalliance.org.uk/images/uploads/ImagineNation_The_Case_for_Cultural_Learning.pdf>

Independent Schools Headteacher Interviews, Cultural Learning Alliance, 2012 <www.culturallearningalliance.org.uk/images/uploads/CLA_Headteachers_inteviews_report.pdf>

Initial teacher training census for the academic year 2015 to 2016, England, Department for Education, 19 November 2015

Jones, Beverly, *School and Academy Engagement with Museums across Bedford, central Bedfordshire, Essex, Hertfordshire, Luton, Thurrock, South End and North Kent*, Royal Opera House Bridge, 2012

Leach, E, Pontin, K, *Evaluation of Six Arts Award Development projects*, Artswork, April 2015 (internal research paper)

Lloyd, R, Neilson, R, King, S, Dyball, M, *Science beyond the classroom: Review of Informal Science Learning*, Wellcome Trust, November 2012

Local Authority Funding in the Heritage Sector, BOP Consulting, Heritage Lottery Fund, June 2015

McKenzie, Bridget, *How can digital services enhance museum learning and partnerships with schools? Digital research strand of the 'Stronger Together' action research programme*, The Langley Academy, March 2015 <www.langleyacademy.org/strongertogether/wp-content/uploads/2015/06/Stronger-Together-digital-research-Flow-Associates-Mar-20151.pdf>

McKenzie, B, Reiss, V, A*CE Museums and Schools Programme: Process evaluation and scoping an outcomes evaluation framework*, April 2015 (unpublished)

May, Katy, *Museums & Heritage Sector, Working with children, young people and schools*, Curious Minds, April 2013

Morris, Estelle, *Review of the Arts Council's Strategic Framework*, Arts Council England, April 2011 <https://www.museumsassociation.org/download?id=358496>

Museums Change Lives, The MA's Vision for the Impact of Museums, Museums Association, July 2013 <www.museumsassociation.org/museums-change-lives>

Museums 2020 Discussion Paper, Museums Association, July 2012 <www.museumsassociation.org/download?id=806530>

Museums, Galleries and Education, Research Paper #2: Museums & School provision – a museum perspective, A New Direction, November 2015 (internal research paper)

New curriculum will make education system 'envy of the world' (press release), Department for Education, 4 September 2014, <www.gov.uk/government/news/new-curriculum-will-make-education-system-envy-of-the-world>

Opening Doors: A review of opportunities for arts and culture in the new education landscape of Yorkshire and the Humber, CapeUK, 2013 <www.capeuk.org/wp-content/uploads/2013/11/SOR-FINAL.pdf>

Paterson, C, Tyler, C, Lexmond, J, *Character and Resilience Manifesto: The all-party parliamentary group on Social Mobility*, January 2014 <www.educationengland.org.uk/documents/pdfs/2014-appg-social-mobility.pdf>

Premium Policies: What schools and teachers believe will improve standards for poorer pupils and those in low-attaining schools, The Sutton Trust, January 2012 <www.suttontrust.com/wp-content/uploads/2012/01/1suttontrustbcgeefreport.pdf>

Renaissance in the Regions: a new vision for England's museums, Resource: The Council for Museums, Archives and Libraries, 2001 <www.museumsassociation.org/download?id=12190>

Research Brief: Extra-curricular Inequality, The Sutton Trust, September 2014 <www.suttontrust.com/wp-content/uploads/2014/09/Extracurricular-inequality.pdf>

Research to understand the resilience, and challenges to this, of Local Authority museums, TBR in partnership

Appendix Four: Bibliography continued

with Pomegranate Seeds LLP and Scott Dickinson, Arts Council England, August 2015 www.artscouncil.org.uk/sites/default/files/download-file/Research_to_understand_the_resilience_and_challenges_to_this_of_Local_Authority_museums.pdf

Schools tacking disadvantage celebrated at pupil premium awards (press release), Department for Education, 12 May 2016 <www.gov.uk/government/news/schools-tackling-disadvantage-celebrated-at-pupil-premium-awards>

Share Academy: The Art of Collaboration, University College London, University of the Arts London and the London Museums Group, 2015 <www.londonmuseumsgroup.org/wp-content/uploads/2015/07/Share-Academy-The-Art-of-Collaboration.pdf>

Taking Part statistical releases, Department for Culture, Media and Sport: <www.gov.uk/government/collections/sat--2>

Teaching School Investment Programme for Arts and Cultural Education 2015/18, Artswork

<http://www.artswork.org.uk/wp-content/uploads/Teaching-Schools-Call-16-18-Criteria.pdf>

The Culture White Paper, Department for Culture, Media and Sport, March 2016 <www.gov.uk/government/uploads/system/uploads/attachment_data/file/510798/DCMS_The_Culture_White_Paper__3_.pdf>

The National Society for Education in Art and Design Survey Report 2015-16, NSEAD, 9 February 2016 <www.nsead.org/downloads/survey.pdf>

The new National Curriculum and Museum Learning: A survey of the opportunities offered by changes to the National Curriculum to school and museum partnerships. A Stronger Together Research Project Report Rutherford, S, Royle, N, The Langley Academy, March 2015 <www.langleyacademy.org/strongertogether/wp-content/uploads/2015/09/Stronger-Together-Curriculum-Change-research.pdf>

Too many of England's poorest children continue to be let down by the education system (press release), Ofsted, 20 June 2013, <www.gov.uk/government/news/too-many-of-englands-poorest-let-down-by-education-system>

Understanding the impact of engagement in culture and sport: A systematic review of the learning impacts for young people, The EPPI-Centre (Institute of Education, University of London), July 2010 <www.gov.uk/government/uploads/system/uploads/attachment_data/file/88447/CASE-systematic-review-July10.pdf>

Watermeyer, Richard, 'Science engagement at the museum school: teacher perspectives on the contribution of museum pedagogy to science teaching', *British Educational Research Journal*, Vol. 41, No. 5, pp. 886–905, October 2015

Wilshaw, M, *Speech to the Institute for Public Policy Research*, 23 February 2016 <www.gov.uk/government/speeches/sir-michael-wilshaw-speech-at-ippr>

Web references

ARTIST ROOMS: <http://www.tate.org.uk/artist-rooms/learning>

Arts Council England, Cultural Education Challenge: <www.artscouncil.org.uk/children-and-young-people/cultural-education-challenge>

Arts Council England, Quality Metrics: <www.artscouncil.org.uk/quality-metrics/quality-metrics>

City of London School Visits Fund: <www.cityschoolvisitsfund.org.uk>

Connecting with Culture: <https://connectingwithculture.com>

Culture Counts: <https://culturecounts.cc/uk/>

Essex History Thinkspace: <https://essexhistorythinkspace.wordpress.com>

King's College London and the Science Museum, The Enterprising Science Project: <www.kcl.ac.uk/sspp/departments/education/research/cppr/Research/currentpro/Enterprising-Science/index.aspx>

Museums Association, museum closures map: www.museumsassociation.org/campaigns/funding-cuts/19062013-museum-closures-map

My Learning: <www.mylearning.org/>

National Portrait Gallery, Picture the Poet: <www.npg.org.uk/whatson/picturethepoet/exhibition.php>

Natural History Museum, Real World Science: www.nhm.ac.uk/about-us/national-impact/real-world-science.html

Our Future City: <www.ourfuturecity.org.uk>

Appendix Four: Bibliography continued

Royal Society for the encouragement of Arts, Manufactures and Commerce, area-based curriculum: <www.thersa.org/action-and-research/rsa-projects/creative-learning-and-development-folder/area-based-curriculum>

Show Me: <www.show.me.uk>

South West Museum Development Programme, annual survey of museums: <www.southwestmuseums.org.uk/publications-resources/research-and-data/>

The British Museum, Talking Objects: <www.britishmuseum.org/about_us/community_collaborations/partnerships/talking_objects/talking_objects_national.aspx>

The Case for Culture North East: <www.case4culture.org.uk/>

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