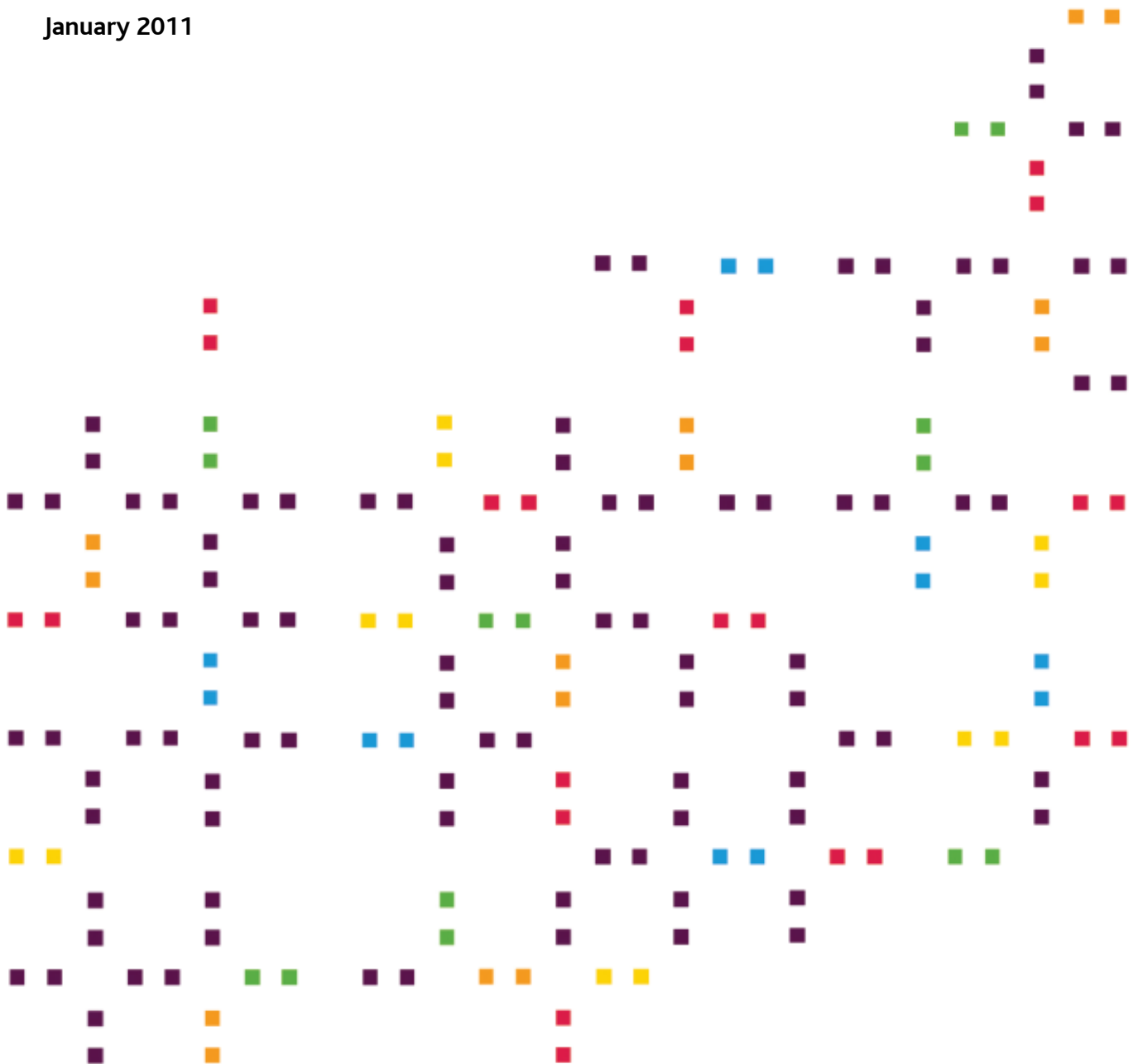


## Evidence of what works: evaluated projects to drive up engagement

January 2011



The CASE programme The Culture and Sport Evidence (CASE) programme is a three-year joint programme of research led by the Department for Culture, Media and Sport (DCMS) in collaboration with the Arts Council England (ACE), English Heritage (EH), the Museums, Libraries and Archives Council (MLA) and Sport England (SE).

The EPPI-Centre (Institute of Education, University of London) and the Matrix Knowledge Group were commissioned to produce this report.



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# Introduction

## Background

The DCMS has four Objectives (DSOs) for 2008-11, namely:

- Opportunity – aim to widen opportunities for all to participate in cultural and sporting activities, including a focus on children and young people to ensure that they have the opportunity to participate in high quality cultural and sporting activities.
- Excellence – aim to create the conditions for excellence to flourish among top artists and sports stars. Champion the provision of top-class facilities, inspiring everyone to realise their talents.
- Economic impact – aim to maximise the economic impact of investment, improve value for money, and take full advantage of the contribution these sectors make towards the government's goal of raising productivity.
- Olympics and Sport for Young People – deliver a successful and inspirational Olympic and Paralympics Games in 2012 that provide for a sustainable legacy and get more children and young people taking part in high quality PE and sport.

CASE is the new £1.8m, three year joint programme of research led by the DCMS in collaboration with the Arts Council England, English Heritage, the Museums, Libraries and Archives Council and Sport England. The overall aim is to strengthen the department's understanding of how best to deliver culture and sporting opportunities of the highest quality to the widest audience, generating the best outcomes for society.

A key component of this work on understanding the drivers of, and value and benefits afforded by, engagement in culture and sport is to develop a model to allow users to explore the implications of different policy interventions and scenarios, such as a recession, for engagement levels and for the outcome/value generated.

The CASE modelling framework focuses on doing sport, visiting heritage sites, visiting museums, libraries and archives, and viewing art. The framework defines various outcomes of engagement in these types of activity, which can be categorised as either economic impacts or social impacts.

It is important to bring together the relevant evidence in order to help advice on future policies. A qualitative review of research and expert opinion was undertaken in 2007 and published as "Culture on Demand". This review provides a framework for understanding demand for culture and sport from a psychological and sociological perspective.

## **Objective of the current study**

As part of the CASE Programme, the EPPI-Centre has gathered a database of research in culture and sport engagement and has undertaken searches of the database to identify various studies that would form the foundation of the synthesis of quantitative studies to be carried out in this study.

The broad rationale for the current review is to identify interventions in the Culture, Sport and MLA realm that successfully show increases in engagement. More practically, the current study provides a list of these interventions and associated key information (target group, sector, likely level of investment to secure success etc.) which would be helpful in selecting or designing an intervention locally.

This report and the accompanying results provide the initial evidence base of quantitative studies related to engagement in culture and sport; the study itself is a dynamic study, i.e. it will continually be added to, as and when new papers are published. As and when a more substantial body of evidence has been established, it may become possible to conduct analysis at an aggregate level in order to draw conclusions for policy (with the possibility of conducting a meta-analysis in order to draw statistical inference).

The ultimate goal of this dynamic review is to generate a synthesised body of evidence that helps to identify, in an objective manner:

- what type of intervention works generally, regardless of sector;
- what type of intervention works specifically in different sectors; and
- what type of intervention clearly does not work.

# Methodology

This section sets out the methodological approach we have followed in conducting the review. This approach comprised the following tasks:

- Theoretical framework;
- Identification of relevant studies; and
- Synthesis of relevant studies.

## Theoretical Framework

The first step was to develop a clear and unambiguous definition of what is meant by 'engagement', 'sport', and 'culture'. This is crucial because it has an impact on many (if not all) of the subsequent aspects of the review process, in particular, the determination of criteria for eligibility/exclusion, the review of the relevant studies, and the presentation of results. So we begin with the following typologies:

- Type of activity (sector);
- Type of engagement
- Type of policy intervention;
- Type of participants (target population); and
- Outcome.

## Types of Activity

The studies reviewed are concerned with engagement in at least one of the following:

- Sport.
- Arts and heritage.
- Museums, libraries, and archives (MLA).

## Types of Engagement

The types of engagement were broadly characterised as follows:

- *Attending* — which requires participants to pay attention to the content in a conscious, intentional way.

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- *Participating* — requires attendance *and* physical/mental interaction in order to contribute to the creation of content.
- *Deciding* — decisions about the delivery of resources for the creation of content, including purchasing behaviour.
- *Producing* — creation of content which has a public economic impact, and includes paid professional work as well training others in the production thereof.

### **Types of Interventions**

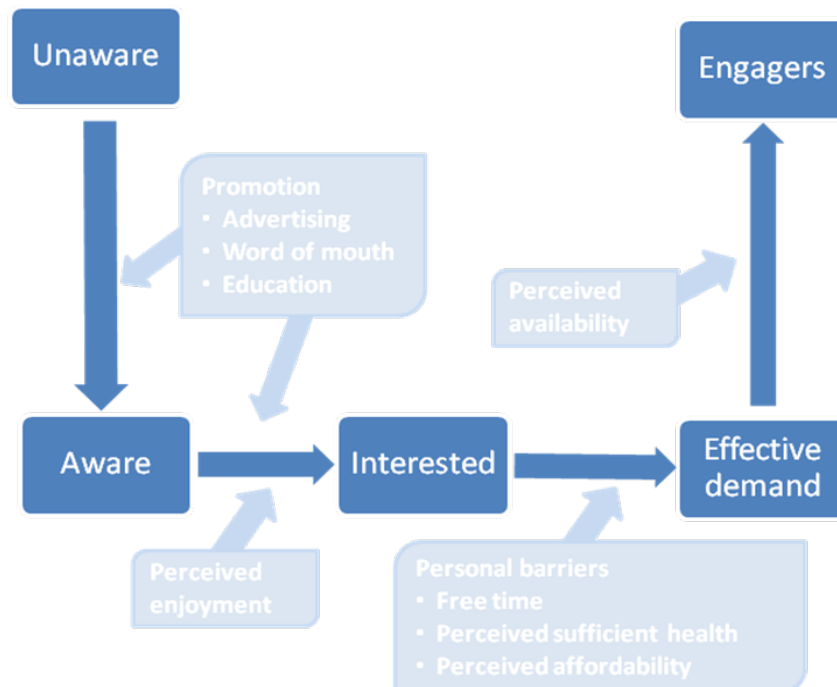
We have defined as relevant any type of intervention that has a direct or indirect impact on the modes of engagement defined above. An example of *direct* intervention is the introduction of services targeted at children in a museum, which is likely to have a direct impact on children and family attendance. An example of *indirect* intervention is the provision of funds to libraries, where the additional financial resource can be used to achieve the outcomes that would result from a direct intervention.

We also consider the conceptual model of the factors that influence engagement in sport and the outcomes produced by engagement put forward by the Matrix Knowledge Group in their report on understanding the drivers of engagement.<sup>1</sup> The high-level model structure is as follows:

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<sup>1</sup> Understanding the Drivers of, and Value and Benefits Afforded by, Engagement in Culture and Sport; Matrix Knowledge Group; April 2010.

**Figure 2.1: Engagement phases**



Based on the above, we group the interventions into the following policy types:

- Cost – this typically involves the removal of an admission fee;
- Resources – this typically involves the provision of additional funding;
- Supply of opportunity – this refers to an instance in which the target population is provided with the chance to engage in some activity that they may not have otherwise taken part in;
- Promotion through advertising – this refers to interventions where publicity is used to encourage engagement; and
- Promotion through education – this refers to interventions where engagement is encouraged through some learning process.

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## **Types of Participants**

In conjunction with the CASE board it was agreed that a broad definition of relevant participants would include:

- *The general public* in its broadest sense, i.e. not only adults but children, young people, people with disabilities, minorities, community, local populations etc.
- *Cultural producers*, who would include creators, professionals, specialist organisations, etc.

Adopting a broad definition of relevant participants allows for the inclusion of outcomes of targeted policy interventions, for example, free admission to museums for young children.

## **Types of outcomes**

As with types of intervention, the types of relevant outcome have also been defined in the broadest possible way. The only restriction we imposed was a requirement that the outcome would measure engagement, as defined above, in one of the activities listed above.

## **Identification of Relevant Studies**

The identification of the relevant studies was conducted in two steps:

- Search strategy
- Inclusion/exclusions criteria

### **Search Strategy**

The search strategy was conducted by the EPPI-Centre. The review was carried out in two stages:

- Stage one: creating a database (repository) of studies.

The first stage of the review consisted of identifying all studies in the field of engagement in culture and sport. This stage of the review produced a database of research on engagement impact and value in culture and sport.

- Stage two: a mapping exercise

The second stage of the review involved describing (or mapping) a sub-section of the literature included in the database created at stage one. Quantitative impact studies were identified and relevant contextual information about each study was collected. This information was presented in the form of a “map” of research, which provided a basis for informed discussion and decision-making between the review team and the CASE board about the focus of the in-depth reviews.

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The outcome was a list of 56 potentially relevant studies for Europe Economics to review in detail. Of these 56, not all were suitable for the systematic review. The basis for excluding some of the studies selected by the EPPI-Centre is briefly described below.

### **Inclusion/exclusion Criteria**

The following three criteria were used to decide which of the 56 studies to include in the detailed review:

- *Quantitative nature of the study* — Engagement with sport and/or culture must have been quantified at least once in the paper.
- *Relevant type of engagement* — the mode of engagement quantified is one of the four types listed above (*Attending, Participating, Deciding, or Producing*).
- *Relevant activity*. — the type of engagement quantified must be related to one of the activities listed above, i.e. sport, arts and heritage, or MLA activities.

Of the studies reviewed 37 were identified as being relevant to this review. A bibliography is presented in the next Section.

### **Synthesis**

In light of the theoretical framework described above, the 37 relevant studies were reviewed in detail. This involved a synthesis of the main findings of the selected studies in order to provide information on what types of policy may or may not be more effective at increasing engagement in culture and sport.

The following information was extracted from each relevant study:

- Target population;
- Sector;
- Engagement type;
- Policy type;
- Resources required for intervention;
- Intervention;
- Outcomes;
- Data source.

In addition to this information, the review also aimed to establish the underlying reasoning for the policy intervention, i.e. a hypothesis as to why the policy would be successful and whether or not there is any potential for conflicts of interest, for example, because the report was written by an association that wishes to promote a certain activity.

The review also established the relative quality of each of the studies using the “Maryland Scientific Method Scale” (MSMS). The MSMS is an objective scaling system which allows the ranking of cause according to how well they control potential threats to validity. A highly reliable causal statement is ranked Level 5, and a statement of very little reliability is ranked Level 1. A Level is assigned to each causal statement according to which of the following five design methodologies has been adopted.<sup>2</sup>

Reliability of the causal statement	Description of the methodology used to support the causal statement
Level 5	Random assignment and analysis of comparable units to intervention and control groups. A well conducted Randomised Controlled Trial fits into this category. The analysis requires the experiment to be conducted before and after the intervention.
Level 4	Comparison between multiple units with and without the intervention, controlling for other factors or using comparison units that evidence only minor differences. A method such as propensity score matching, that used statistical techniques to ensure that the intervention and comparison groups were similar would fall into this category. The analysis requires the experiment to be conducted before and after the intervention.
Level 3	A comparison between two or more comparable units of analysis, one with and one without the intervention. A matched-area design using two locations in the UK would fit into this category if the individuals in the research and the areas themselves were comparable. The analysis requires the experiment to be conducted before and after the intervention.
Level 2	Temporal sequence between the intervention and the outcome clearly observed; or the presence of a comparison group that cannot be demonstrated to be comparable. A study that measured the outcomes of people who used a service before it was set up and after it finished would fit into this level.
Level 1	Observed correlation between an intervention and outcomes at a single point in time. A study that only measured the impact of the service using a questionnaire at the end of the intervention would fall into this level.

A spreadsheet database containing all the results of the synthesis is provided as a separate document.

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<sup>2</sup> For some studies the assignment of a Level was not immediately clear. In these situations the assignment was made only after consensus was reached among the reviewers.

# Bibliography

## Studies Included in Review

Is Charging Economic? Dr. Robert Anderson, Director of the British Museum Published in the Journal of Cultural Economics
Measuring the impact of free admission Ben Cowell, Head of Museum Sponsorship, DCMS Published in Cultural Trends, a statistical digest
Access to the Victoria and Albert Museum John Bourn, National Audit Office NAO report
Does Bat day make cents? The effect of promotions on the demand for major league baseball Mark McDonald, University of Massachusetts at Amherst. Published in the Journal of Sport Management
The impact of free entry to museums Andy Martin, Head of Leisure Research MORI
The Librarians Reading Renaissance: Survey Report. The Institute for Academic Excellence
A Preliminary Assessment of a New Arts Education Programme in Dutch Secondary Schools Folkert Haanstra, Ineke Nagel and Harry Ganzeboom Published in the Journal of Art and Design Education
Culture Craft Saturdays - Serving at-risk populations Lisa Falk and Stephen Powers Academic working paper by the University of Arizona; commissioned by Institute of museums and library services grant museums for America program
Effects of a mobile electronic guidebook on visitors attention and visiting behaviour Yao-Ting Sung; Kuo-En Chang; Yi-Hsuan Lee; Wen-Cheng Yu Published in the Journal of Educational Technology & Society
MTV to the rescue: changing library attitudes through video Eileen Wakiji and Joy Thomas Published in Journal: College Research and Libraries (Journal)
The role of website content on motive and attitude change for sport events Kevin Filo, Daniel C. Funk and Glen Hornby Published in Journal: Marketing and Sponsorship
The influence of museum exhibit design on immersion and psychological flow Mark L. Harvey; Ross J Loomis; Paul A. Bell; and Margaret Marino Published in Journal: Environment and Behaviour
Evaluation of the continuing impact of the DCMS/ Wolfson Public Libraries Challenge Fund 2000-02 Book Marketing Limited Research commissioned by The Council for Museums, Archives and Libraries, in association with

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<p>the National Reading Campaign</p>
<p>"I wouldn't do it, it looks dangerous" Changing students' attitudes and emotions in physical education          Claudio Robazza, Laura Bortoli, Attilio Carraro, Maurizio Bertollo          Published in journal: Personality and Individual Differences</p>
<p>Pricing public parks          K.G. Willis          Published in Journal of Environmental Planning and Management</p>
<p>Head start: the social impact of Boots books for babies          Morris Hargreaves and McIntyre          Funded by the Boots Books for Babies public-private partnership between the library services of Nottinghamshire County Council and Nottingham City Council, the county's Health Trusts and the Boots Company</p>
<p>Assessing the effects of library instruction          Chris A. Portmann and Adrienne Julius Roush          Published in the Journal of Academic Librarianship</p>
<p>Social impact of heritage lottery funded projects (2007)          Applejuice consultants          Conducted for heritage lottery fund</p>
<p>Social impact of heritage lottery funded projects (2006)          Applejuice consultants          Conducted for heritage lottery fund</p>
<p>Social impact of heritage lottery funded projects (2008)          Applejuice consultants          Conducted for heritage lottery fund</p>
<p>Counselling increases physical activity behaviour nine weeks after rehabilitation          H P van der Ploeg, K R M Streppel, A J van der Beek, L H V van der Woude, M M R Vollenbroek-Hutten, W H van Harten, W van Mechelen          Published in journal: Br J Sports Med</p>
<p>New on the shelf: teens in the library; Findings from the evaluation of public libraries as partners in youth development          Julie Spielberger, Carol Horton, Lisa Michels and Robert Halpern          Chapin Hall Center for Children at the University of Chicago</p>
<p>Review and Evaluation of WiFi in Public Libraries          Civic Regeneration and Information Management Associates          Report to the Museums, Libraries and Archives Council</p>
<p>Learning curve: adapting library workspaces          James C. Haug          Educause Quarterly</p>
<p>Investigation of the effects of student-selected repertoire on the practice habits of instrumental music students          Vincent Greco          Practicum papers (dissertation/thesis)</p>
<p>Public Libraries' Impact on learning: children and young people          ERS          Commissioned by MLA North East</p>

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<p>Second evaluation of the improving literacy through school libraries program US Dept of Education</p>
<p>Wales Bookstart Impact Evaluation 2008 Bookstart</p>
<p>Bookstart National Impact Evaluation 2009 Bookstart</p>
<p>The effect of office-based physician's advice on adolescent exercise behaviour Ricardo Ortega-Sanchez, Carmelo Jimenez-Mena, Rodrigo Cordoba-Garcia, Joaquin Mun˜oz-Lopez, Maria Luisa Garcia-Machado and Jordi Vilaseca-Canals Published in journal: Preventive Medicine</p>
<p>The effects of increased access to books on student reading using the public library Nicole Whitehead Project Innovation (Alabama)</p>
<p>Fast Forward Update 2002: Analysis of trend in museum performance in the West Midlands West Midlands Regional Museums Council</p>
<p>The YDance 'Dance-in-Schools Initiative' (DISI): Final Evaluation Report Janine Muldoon &amp; Jo Inchley Child and Adolescent Health Research Unit (CAHRU), University of Edinburgh; funded by Scottish Government Health Dept</p>
<p>The impact of a cultural children's program and adult mediation on children's knowledge of, and attitudes towards opera Patti M. Valkenburg a; Marina Krcmar b; Sandy de Roos Published in Journal of Broadcasting &amp; Electronic Media</p>
<p>Summer Reading Challenge 2006 Impact Research Report product perceptions ltd. The Reading Agency January 2007</p>
<p>Summer Reading Challenge 2009 Impact Research Report Rebecca Kennedy and Eve Bearne United Kingdom Literacy Association December 2009</p>
<p>Evaluation of the New Opportunities in PE and Sport Initiative (NOPES) The Loughborough Partnership Year Three Report (2006)</p>

# High-level Conclusions

We stress that the conclusions presented in this Section should be treated with caution and should not be taken in isolation given the dynamic nature of this study. This report and the accompanying results provide the initial evidence base of quantitative studies related to engagement in culture and sport; the study itself is a dynamic study, i.e. it will continually be added to, as and when new papers are published.

Given the nature and diversity of the studies that were reviewed, it is not possible to draw concrete conclusions with regards to policy interventions that work, i.e. it is not possible to draw conclusions based on analysis conducted at an aggregate level. However, there are some broad high-level themes that emerge from the review; these are highlighted below.

## **Sports**

The effect on promotion of engagement in sport via a trusted sport was considered in various papers that were reviewed; in particular, these studies looked at specific sports counselling, the provision of physical education or specific workshops, all of which relied upon a trained teacher or counsellor. Based on the studies reviewed, this appears to be an effective intervention mode to engage people with sport.

Interventions based on promotions and advertisements also appear to have a positive effect on the motivation and likelihood of people attending sports events. (However, it should be noted that the studies that looked at these interventions did not measure active participation in sports.)

## **Arts and Heritage Studies**

While the studies reviewed concerning arts vary greatly, we tentatively draw the following broad conclusions:

- A positive intervention to encourage students to engage with music, in the form of practicing an instrument as well as attending music classes, allowed the students to design up to 50 per cent of the curriculum. This freedom of expression provides the necessary ownership for students to engage with music.
- Similarly, a good, engaging teacher can be a strong motivating factor for students to show an active interest in a subject they were previously less interested in. This is evidenced by the study which shows the differences in attitudes of students towards opera following the listening of a tape on opera with a proactive teacher; however it should be noted that these improvements, while positive, were marginal.

With regards to heritage, the study which modelled the effect of introducing price schemes to public parks indicates that cost is indeed a substantial personal barrier to visiting parks, and that in case of a fee, attendance of parks would drop drastically.

Similarly, for the three studies in this sector which were identical in terms of their methodology and measured outputs, it can be said with confidence that heritage-funded programmes significantly increase awareness and enjoyment of heritage. Similarly, the projects are effective in increasing the opportunities to learn about heritage and reaching a wider audience, thus contributing to the Heritage Lottery Fund's goals. However, the weakness of the methodology, namely that its results are mainly based on interviews with project managers, and conversations with project participants, puts the objectivity of these outcomes into question.

### **Museums, Libraries and Archives**

While the eight studies related to engagement with museums vary to some extent, we tentatively draw the following broad conclusions:

- The removal (introduction) of admission fees at museums significantly increases (decreases) the attendance to museums as it reduces (increases) the perceived personal barrier of affordability and thus acts as a motivating (de-motivating) force to attend museums. While the cost of removing fees was not clearly stated in most studies, it is clear that this does have a positive impact on the number of visitors.
- Interventions based on new technologies, such as the use of an electronic guidebook, did lead to substantial increases in the engagement with museums as this contributed to longer visiting times on behalf of students with the device compared to those without the supplementary materials.
- Activities aimed at children and family friendly provision increase the accessibility of museums to families and thus the likelihood of families attending a museum exhibition. However, as this study only measured the likelihood of families returning to a museum that were at that moment at a museum already, this implied result of family friendly provisions attracting families to museums needs to be treated with care.

The reviewed studies that were concerned with libraries and archives vary considerably in their scope and the interventions considered. It is possible to draw the following high-level conclusions, though we note that these should be interpreted with care:

- Interventions that aim to educate students on the possible uses of the library, such as watching a video tape, generally have positive effects, although these are found to be much stronger at the undergraduate rather than the graduate level, as graduate students are likely to make more use of the library already. Similarly, a bibliographic instruction session on library skill development and

library use has positive impacts on the likelihood of students using the library, particularly the internet, for school-related information as well as accessing online college databases.

- Interventions that increase the attractiveness and usability of a library through new technologies, such as Wi-Fi, and information commons area with new computers, increase not only the public profile of the library but also the number of users, as well as the circulation of books. Naturally, these interventions are likely to come with a substantial cost, but they appear to be effective in engaging people with libraries. Similarly, extra funding to libraries, which can then be used in any way the libraries see fit, also leads to an increase the library membership, usage of the library and the number of books being borrowed.
- Projects that aim to improve the usage of libraries by children and youths, for instance class trips to libraries and the summer reading challenge, increase the likelihood of children using the library independently. Similarly, it is reported that the number of students reading at home, as well as the amount of books they read and the time they actually read on average, increases as a result of this intervention.

### **Strengths and limitations of this review**

We believe that the main strength of the review is represented by the fact that, being based purely on quantitative studies, it allows an objective assessment of the quality and reliability of the findings put forward.

Nevertheless, the review suffers from a number of limitations.

First, the high degree of variations between the typologies of interventions encountered and the relatively small number of studies at our disposal means that it is difficult to draw concrete conclusions with regards to policy interventions. This problem is further aggravated by the fact that the number of available studies is significantly biased towards some sectors.

Further, the high proportion of studies whose strength of findings was two or below, further weakens the results of our review and moreover, it precluded the possibility of conducting a formal aggregate analysis through a meta-analytical approach.

At a higher level, and with regard to drawing policy conclusions from this review, we stress two points concerning the general reliability of intervention studies. First, we cannot exclude the possibility that even the higher level studies suffer from problems of bias. In our view this could be due to the two following reasons:

- *Publication bias*: it is well known that studies that show significant impacts of intervention are more likely to be published; and

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- *Experimental bias*: since experiments may require considerable resources, these are more likely to be carried out only if a 'positive' outcome is expected.

Second, the significance of the impact of certain interventions is measured by the magnitude of the responses. However, another important aspect in defining whether or not an intervention is successful is the long-term impact of the interventions. A given intervention might have a large short term impact which vanishes over time, while others might have a relatively modest but permanent impact. Unfortunately, the time effects are not always susceptible to estimation

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