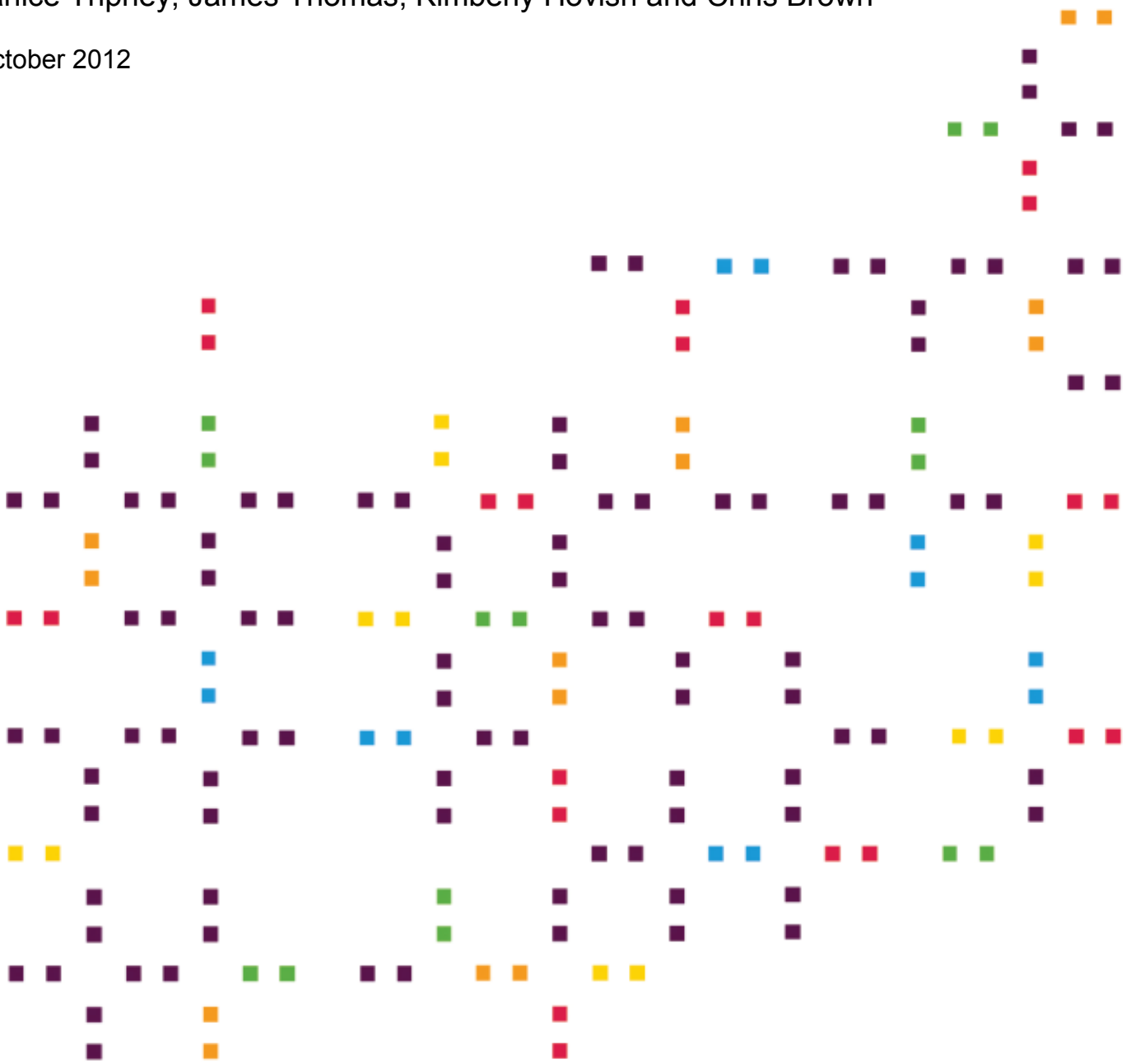


Methods used for the CASE database 2012 update

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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).

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Introduction

The purpose of this paper is to provide supplementary information to the interested user on how the CASE database was updated by the EPPI Centre in March 2012. In addition, the paper will inform decision-making regarding future updates by the database sponsors, the Culture and Sport Evidence programme (CASE), to ensure the continuing quality of this important resource.

The CASE database is a multi-disciplinary bibliographic resource bringing together UK and international research literature from across the sports, arts, heritage, museums, libraries and archives sectors. It was developed as a part of the flagship CASE project *Understanding the Drivers, Impact and Value of engagement in culture and sport*, undertaken during 2009-2010. To ensure that the database remains a valuable resource for researchers and policy makers, it requires regular updating to include the latest evidence. It was updated in spring 2011 when 2515 relevant study reports published between mid-2009 and the end of February 2011 were added to the original 5,518. This paper outlines the general approach taken for the 2012 update, providing detailed information on how the update was conducted and a consideration of lessons learnt.

The conceptual scope of the CASE database is deliberately broad and inclusive. It includes empirical research published¹ since 1996. The boundaries of 'culture' and 'sport' were determined by broad policy definitions of these sectors (in practice, activities/sites listed in the CASE/DCMS sponsored survey Taking Part were used). Engagement was defined on four dimensions: 'attending' (e.g., visiting a museum); 'participating' (e.g., playing football); 'deciding' (e.g., donating to a heritage conservation fund); and 'producing' (e.g., working as an artist in a professional capacity). Engagement undertaken by any population group was within scope. Based on this conceptual framework a set of eligibility (inclusion/exclusion) criteria were developed. A small number of specific exclusions applied, such as studies about physical activity and school physical education (unless

1 Indexed in bibliographic databases or made publicly available on websites.

sports were mentioned), and research focussing purely on the bio-medical outcomes of sport. Full details can be found in the Technical Report (Tripney et al., 2010).²

To increase the comprehensiveness of the search and ensure thorough capture of both academic and grey³ literature across all four sectors⁴, the number and range of search sources used were necessarily extensive. For the original 2009 search, literature was located through the following sources: general bibliographic databases; specialist databases of cultural/sporting literature; specialist journals that were not indexed in the databases; websites of key organizations and research centres; publication lists of subject specialists; social science research funding bodies; Google; recommendations from the CASE Advisory Board; reference lists from selected literature reviews; and, items retrieved through serendipitous discovery. A highly sensitive search strategy was devised for the bibliographic databases and adapted for each of the remaining source types. The number of search query terms was extensive (over 50 different types of sports, eight heritage and 16 arts categories were used as controlled and/or free-text terms). A summary of the general approach taken for searching the different types of sources for the original database is detailed in Schucan-Bird and Tripney (2011).

For the original search in 2009 and each of the updates, the approach to study selection involved a combination of manual and automated processes. In order to retrieve as much relevant information as possible (so sacrificing *specificity* for *sensitivity*), the CASE search query retrieves many thousands of titles and abstracts which then need to be sifted through manually in order to find those that are relevant. This process is referred to as screening. Identifying relevant studies is one of the most time-consuming aspects of systematic reviewing. To reduce the manual screening workload involved in identifying studies for the CASE database, text mining technologies in the form of automated document classification have been used to support the filtering process (Ananiadou et al., 2009). Relying on rich linguistic features, the document classification process 'identifies the underlying patterns and distinguishing features within documents that makes them part of a defined grouping or class' (Thomas et al., 2011: 3). In practice, its use for the CASE database has required reviewers to screen a subset of records manually to identify items which meet the selection criteria, which have then been used as training material by the classifier to identify which of the remaining titles and abstracts were 'similar' to the pool of included studies. These 'similar' items have then been manually screened.

² <http://www.culture.gov.uk/images/research/CASE-systematic-review-technical-report-July10.pdf>

³ For example, reports published by funding agencies.

⁴ (i) sports, (ii) arts, (iii) heritage, and (iv) museums, libraries and archives

For the 2012 update of the CASE database, the original search strategy was amended to incorporate other potentially useful search sources (see below). The search focused on the identification of relevant literature published between 1st March 2011 and 28th February 2012. The reviewing software, EPPI-Reviewer, which is developed and maintained by the EPPI-Centre at the Social Science Research Unit, Institute of Education, University of London, was used to manage the updating process.⁵

⁵ See Thomas et al. (2010)

What did we do in this update?

For the 2012 update, a number of new sources were added to the original search strategy. These included:

1. Four electronic bibliographic databases
 - Two general social science databases: Social Services Abstracts (CSA); Sociological Abstracts (CSA)
 - Two specialist databases: SPORTDiscus (EBSCO); Physical Education Index (CSA)
2. Elements of the search strategy used to develop and maintain the *Impact Database*⁶
 - 29 additional websites
 - weekly Google Alerts
3. Thirteen additional web sources identified by the CASE Advisory Board.

There were some elements of the *Impact Database* strategy that it was not possible to accomplish within the timescale of the 2012 update. They included (i) internet searches to follow up on sources found in bibliographies or news articles; (ii) subscriptions to newsletters of relevant bodies/ organisations; (iii) checking reference lists of publications collected for the *Impact Database*; and (iv) searches of journal alerts.

The complete 2012 search strategy is presented in Appendix 1.

⁶ Operated by the Centre for Cultural Policy Research (CCPR) at the University of Glasgow. The final update took place in March 2011.

What did we find?

The results of the process of conducting the 2012 update of the CASE database are presented in Figure 1. The initial searches of general bibliographic databases identified 17,144 potentially relevant items, after removal of 2731 duplicates. These 17,144 items were screened for eligibility using a semi-automated approach which involved both text mining techniques and manual screening.

There were three phases in the selection process (represented by the diamond in Figure 1), the results of which are detailed next.

1. A random 10% sample of the 17,144 items was manually screened, resulting in 476 includes and 1239 excludes. The text mining was applied to the remaining 15,429 items. On the basis of the 476 items, the automatic classifier identified 6,410 as being the most relevant. These were manually screened, resulting in 3,051 includes and 3,359 excludes.

Phase 1: total number of included items: $476+3,051 = 3,527$

2. The text mining was run again on the items excluded by the classifier ($n=9,019$). This time, a very small number of items ($n=199$) were identified by the classifier as being relevant. These were manually screened, resulting in 92 includes and 107 excludes.

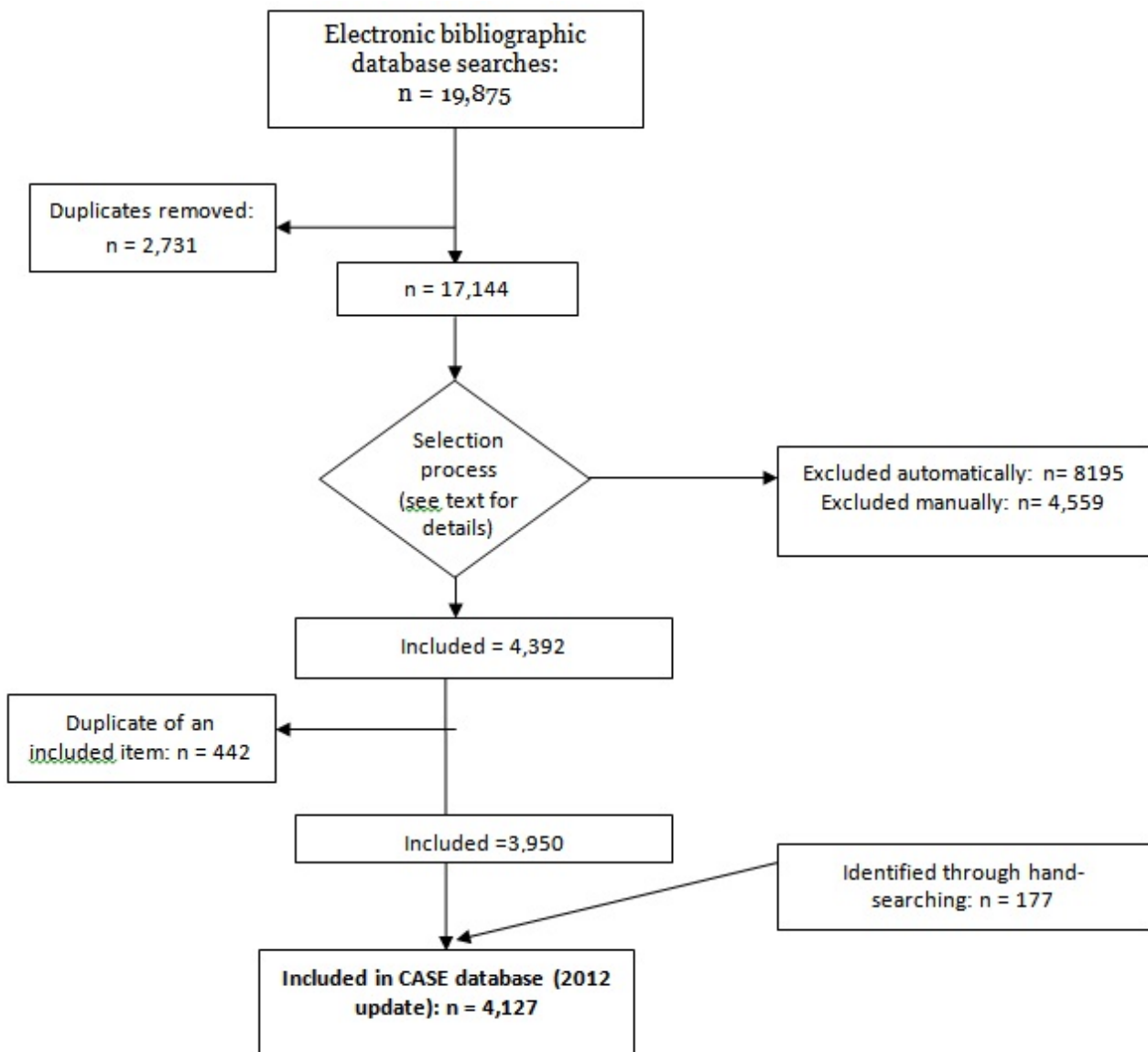
Phase 2: total number of included items: 92

3. Targeted searches identified a further 1,773 potentially relevant items. Manual screening identified 773 of these as meeting the inclusion criteria.

Phase 3: total number of included items: 773

Together, these three phases identified a total of 4,392 relevant items. At this point, further manual identification and removal of 442 duplicates was undertaken, resulting in a final total for the general/specialist bibliographic database searches of 3,950.

Finally, reviewers undertook the hand-searching task. Nine of the studies identified through this approach had been picked up by the bibliographic database searches, and so required no further action. A further 177 relevant items not already identified were added to the CASE database, resulting in a final total for the 2012 update of 4,127 items.

Figure 1: flow of literature through the different stages of the update process

A further breakdown of the source of the included 4,127 items is presented in Tables 1 and 2.

Table 1 details the number of potentially relevant items identified through each of the 12 database searches (both before and after duplicates are removed), and the final number of included items for each. Of the 3,950 includes, 899 have a duplicate attached. Whilst the final right-hand column is not a fully accurate account of the 'value' of each database used in the search (due to the way in which duplicates are addressed in EPPI-Reviewer) the information in the table provides some indication of the proportion of included studies provided by each database.

Table 1: results of the electronic database searches

<i>Databases searched⁷</i>	<i>Potentially relevant items imported into ER4</i>	<i>No. duplicates removed</i>	<i>Potentially relevant items (after duplicates removed)</i>	<i>No. of included items</i>
ERIC	1172	96	1076	209
ASSIA	312	74	238	38
BHI	687	11	676	16
PsycINFO	1841	292	1549	542
IBSS	1251	172	1079	86
SSCI/AHCI	2159	720	1439	297
Econlit	1148	101	1047	65
Medline	3468	351	3117	928
SPORTDiscus	5684	772	4912	1127
Social Services Abstracts	68	16	52	3
Sociological Abstracts	467	108	359	40
PhysEd	1620	20	1600	599
TOTAL	19,877	2,731	17,144	3,950

Table 2 provides a brief overview of the results of the hand-searching. Overall, the web searches yielded a similar proportion of the overall total to that found for the 2011 update (approximately 4% of all studies identified during each update). Again it was found that not all of the websites provide the same 'value', with some yielding no additional studies. Of the 50 websites listed in the original search strategy that were searched, only 29 led to the identification of new study reports. Only nine of the 29 websites listed in the Impact search strategy and seven of the 13 websites recommended by the CASE Board identified relevant new material. Hand-searching the Impact Database itself, the websites of UK research funding bodies, and the relevant editions of three online journals resulted in the addition of a further 12 items to the CASE database. Monitoring the web using Google Alerts did not identify any new studies.

⁷ The full titles and hosts of the databases below are listed in Appendix 1 of this paper.

Table 2: results of hand-searching

<i>Hand-searching source types</i>	<i>No. of studies</i>
Websites (original search strategy)	80
Websites (impact search strategy)	54
Websites (suggested by the CASE Board 2012)	26
Websites (via both the original search strategy and the Impact Database strategy)	5
Impact Database	2
Research funding bodies	3
Journals	7
Google Alerts	0
TOTAL	177

What have we learnt from this update?

A number of issues arose during the 2012 update that required slight changes to our approach to identifying relevant literature. This has implications for the next update. Analysis of the updating strategy presented in the section above provides an opportunity for reflection on the updating process to inform possible improvements to future updates. Table 3 details the different issues and key recommendations.

Table 3: Lessons from the 2012 updating process

Issue	Details	Implications and recommendations
1. Data sources used in original update	The vast majority of the data sources used in the original search and the first update were used again for the current update.	For the original database search in 2009, the 2011 update, and the most recent update, a relatively high number of the original websites that not led to the inclusion of new studies. Further analysis to determine if there are websites that have consistently (i.e., across all three time-points) returned no includes, and/or very low yields, is recommended .
	A Google or Google Scholar search was not conducted as part of this update (as we signed up for Google Alerts – see below).	It is not yet clear whether the search should continue to utilise Google and Google Scholar.
	It was not necessary to hand-search two journals on the original search strategy (International Review for the Sociology of Sport and Sport in Society) as these are indexed in SportDISCUS (a new database being searched during this update).	Recommend that of two of the three remaining journals on the hand-search list (Engage Journal and Visual Culture in Britain) are dropped as searches of these sources consistently return very few hits (none in the 2011 or 2012 updates). The remaining journal (Cultural Trends) is now indexed in the BHI database, so in theory it no longer needs to be hand-searched. However, it was hand-searched during this update and yielded a small number of eligible studies that had not been identified via the database search. Recommend that before the next update an examination of these items is undertaken to determine which query terms (if any) should be added to the search string used to search the bibliographic databases. (NB: It is highly possible that the 2012 issue of Cultural

		Trends was not indexed in the BHI database when it was searched.)
	Searching the Impact Database was a key component of the original search strategy. For this update, it was only necessary to search for items included during March 2011 (as it ceased operation on 31 March 2011)	As the Impact Database is no longer being maintained, it will no longer be part of the updating strategy.
2. New data sources: SportDISCUS bibliographic database	The decision during this update not purchase the SportDISCUS was taken on the grounds that it was available to EPPI/IOE researchers through University College London library where they can also access Econlit (both SportDISCUS and Econlit are provided by EBSCO, a database host/provider that IOE does not itself subscribe to). For PsycINFO, also hosted by EBSCO, Senate House library is used. An EBSCO representative has confirmed that the version held by UCL is 'complete' and purchasing a subscription would not lead to different results. The search itself returned far more hits than anticipated. Even after the use of a filter for 'peer reviewed items only', and duplicates were removed, almost 5000 items remained for screening. Of these, 1127 were included.	Recommend the same approach for any future update. It will now be possible to cost this element of the updating task more accurately.
3. New data sources: Social Services Abstracts; Sociological Abstracts	Including these new sources in the search entailed very little additional resources since they are hosted by CSA, which hosts many of the other social science databases EPPI normally search. Sociological Abstracts yielded 40 new studies while Social Services Abstracts yielded an additional 3 studies.	Recommend searching both Sociological Abstracts and Social Services Abstracts in the next update.
4. New data sources: Physical Education Index	This specialist database was searched as it too is hosted by CSA. Compared to the two additional social science databases, this yielded a far higher number of included studies (n=599).	Recommend that this is repeated in the next update.
5. New data sources: Impact Database search strategy	Of the 29 websites listed in the Impact Database search strategy, only nine led to the identification of relevant literature. A key consideration here is the amount of time spent on this aspect of the searching.	Recommend that only some of the websites are included in a revised search strategy for any future update. Suggest that (at a minimum) those websites that are not culture or sport focused (e.g., Joseph Rowntree Foundation) and which did not lead to the identification to new studies in the 2012 update are omitted.

		These have been tagged with * in Appendix 1.
6. New data sources: websites suggested by the CASE Board	In the case of seven of the 13 websites recommended by CASE the searches resulted in additions to the database.	Recommend that these website are included in a revised search strategy for any future update. Although many did not lead to new studies, they are all websites of important stakeholder organisations.
7. New data sources: Google Alerts	Using Google Alerts, the web was monitored for relevant studies using the ten search queries listed as part of the Impact Database search strategy. This did not result in any additional items.	Recommend that Google Alerts based on the particular search term strings used in this update are not used for further updates.
8. Inclusion criteria	<p>In a number of respects, the inclusion criteria have evolved (slightly) from the original database.</p> <p>For this update, the decision was taken to include studies about a broader range of sporting activities than specified in the original inclusion criteria. Eligible sports were those listed on Sport England's 'one million sports participation indicator', with the exception of recreational walking.⁸</p> <p>As this decision was taken midway through the update the search query was not amended and so some studies about these 'new' sports will not be included in the database. For two sports (snowboarding and wrestling) a targeted search of the items excluded during the 2009 and 2011 searches was conducted and 84 additional items were added to the database.</p> <p>During the initial database work (2009) the decision was taken to include studies which examined the drivers, impact or value of listening to recorded music (i.e., not at live events as specified in the Taking Part survey which was the basis of the inclusion criteria). This practice was</p>	<p>Recommend that the inclusion criteria are re-written to reflect any changes that have been made.</p> <p>Recommend that the search string is amended to reflect the inclusion of additional sports within the scope of the CASE database (see no.9 below).</p>

⁸ To find out more about the sports participation indicator and the one million target, see the following Sport England briefing note which also highlights the activities included (see Appendix A): http://www.sportengland.org/research/active_people_survey/active_people_survey_3/idoc.ashx?docid=65e2f302-dbf-49b2-b7bd-a05bb087cfc3&version=2

	<p>continued in both the 2011 and 2012 updates. However, this change to the inclusion criteria is not clearly reflected in the Technical Report.</p>	
<p>9. Search query terms</p>	<p>For the 2012 update, the search query was altered slightly, primarily via the use of less truncation, where its use in previous updates had been found to have contributed many irrelevant items to the pool for screening.</p> <p>Identifying a body of cross-disciplinary social science research literature is a challenge, as this is an area that does not have well-indexed, comprehensive databases. To address this limitation, the CASE database search consists of a multiplicity of query terms (both controlled and free text). The initial task of identifying which query terms to use was not straightforward and involved several rounds of piloting. Nevertheless, there are currently two main issues:</p> <ol style="list-style-type: none"> 1. the considerable number of items that the searches produce (over 17,000 in the current update); and 2. The possibility that there are additional relevant query terms. This is based on the finding that the search of BHI did not pick up all the items indexed in Cultural Trends journal (see no.1 above). 	<p>Recommend that the query terms are re-examined. Since the search query was first executed in 2009, two database updates have been completed, providing an opportunity to further reflect on the efficiency and effectiveness of the query terms.</p> <p>The use of the Boolean operator NOT could be explored, in order to reduce the number of potentially relevant records that have to be sifted through.</p> <p>It is also worth exploring is the use of a term recognition service (such as TerMine) to check that the current search string contains all possible query terms.</p> <p>Recommend that the search string is amended to reflect the inclusion of additional sports within the scope of the CASE database (see no.8 above).</p>
<p>10. Study selection process: manual screening</p>	<p>A semi-automated approach to study selection (i.e., combining automatic document classification with manual screening) was used. The use of this approach should ensure that out-of-scope studies do not appear in the CASE database. However, although manual approaches are the gold standard, they are not 100% error free. Given the very broad scope of the CASE database, and the relatively limited resources allocated to quality assurance processes (see no.15 below), it is possible that some ineligible studies have been included (and vice versa) during manual screening.</p>	<p>Recommend that manual screening is retained as a key component of the selection process.</p>

11. Study selection process: text mining	<p>Text mining offers a less resource intensive approach to study selection; though at the risk of excluding some relevant studies. Automatic document classification does not yet provide 100% precision (and may never do). The classification process, for example, is highly dependent on the representativeness of the sample of included studies used to train the classifier.</p>	<p>An appropriate next step would be to quantify the likely number of studies that have been missed. This could then feed into further investigation into the pros and cons of using text mining in any future update.</p> <p>Some issues to be taken into consideration when thinking about discontinuing use of text mining to aid study selection:</p> <ol style="list-style-type: none"> 1. Increased resources would be required to allow all retrieved items to be manually screened 2. A way of managing costs would, therefore, be to reduce the number of bibliographic databases to be searched (bearing in mind that this too would result in missing items: see Table 1) 3. It would also be possible to reduce the number of search query terms. For example, discontinue inclusion of the 'free text' terms (although experiences during the piloting exercises indicate that this too would result in missing items) 4. Another option is to conduct further work on the search query strings. One possibility might be to explore the use of the Boolean operator NOT (although this is generally considered to be a risky approach, with the potential to miss studies). Further detailed examination of the non- relevant items that are picked up by the searches could be undertaken. Whilst this exercise has already taken place, it could perhaps be improved upon. That said, a large proportion of the irrelevant items are known to be non-empirical (e.g., commentaries, book reviews, bibliographies etc.) and these are almost impossible to exclude through the use of the operator NOT in the search query. Indeed, text mining has proved very efficient at excluded these types of citations.
12. Coding	<p>For studies in the areas of sports, arts and heritage, the coding was undertaken using the existing keywords listed in the search interface. As MLA is no longer a coherent grouping, due to its demise</p>	<p>Recommend that coding using the existing keywords is repeated in any future update.</p> <p>The question of whether to add further descriptive codes to facilitate easier and</p>

	<p>as a DCMS Arm's Length Body, the relevant new items were coded separately as museums, libraries and/or archives. In addition, the MLA-coded items identified in 2009 and 2011 (approx. 1200) were also manually recoded.</p> <p>Manual coding using simple keywords does not place a heavy burden on resources.</p>	<p>faster searching should be explored by first determining if this fits with user needs.</p>
<p>13. De-duplicating</p>	<p>The semi-automatic duplicate checking function in EPPI-Reviewer identifies potential duplicates which must be manually processed. Its precision is not 100%. Further manual checking by visually scanning the titles is always required.</p> <p>Manual de-duplication exercises were undertaken on (a) the items from the 2009 and 2011 searches; and (b) the new items from the 2012 update.</p> <p>Number of duplicates removed:</p> <p>(a) 19</p> <p>(b) 442</p> <p>In the EPPI tender application a total of 1.5 days were allocated to this part of the update process. In practice, at least twice the number of days was spent on these tasks (it is not always possible to judge the time needed to complete the de-duplication process). The additional hits from the new databases searched during this update contributed to the scale of the de-duplication task.</p>	<p>Recommend that resources allocated to de-duplication are increased in a future update.</p>
<p>14. Quality assurance</p>	<p>Quality assurance (QA) exercises were undertaken on (a) the items from the 2009 and 2011 searches; and (b) the new items from the 2012 update.</p> <p>(a) QA on items from 2009 and 2011 searches included:</p> <p>(1) manual checking and removal of 125 ineligible items erroneously included</p> <p>(2) manual checking and 'cleaning' of citations concentrated on (i) adding in missing authors' names, dates of publication and titles, (ii) correcting any strange characters in the authors' and titles' fields, and (iii)</p>	<p>Recommend an increase in resource for QA in future updates.</p>

	<p>formatting authors' names, including listing authors' surname first. One of the implications of (iii) was that this often resulted in duplicate items being revealed.</p> <p>(b) In the QA of new items from the 2012 update in order to reduce the risk of error, the manual screening exercises incorporated standard quality assurance mechanisms used in systematic reviewing, such as double screening on a sample of studies and further moderation.</p> <p>In the tender, a total of 1.5 days were allocated to this part of the update process. In practice, at least twice the number of days was spent on these tasks.</p>	
15. Usability	<p>The user interface of the web-database remains the same.</p> <p>The introductory text was updated to reflect the inclusion of SportDISCUS in the search.</p> <p>At present, this introduction directs the user to the Technical Report if they require information about the scope and methods of the database project.</p>	<p>The utility of the database could be improved by enhancing the interface to the database to make it more accessible and increase its functionality.</p> <p>Recommend that a summary of the scope and methods is provided for the users of the database (for example, Appendix 1 of this report could be used to detail the search sources).</p>

Conclusions

This brief report has outlined the methods and findings of the 2012 update of the CASE database and presented a number of options for improving the database and hence its value. Identifying all of the research evidence in any field is challenging, as it involves balancing the need to be as exhaustive as possible with the review's resource constraints. The task is particularly challenging in the social sciences, which lacks well-indexed, comprehensive databases. The retrieval of large numbers of irrelevant titles and abstracts in comparison to the number of correct hits is inevitable, particularly in conceptually broad reviews such as the CASE database. EPPI consider that text mining technologies offer many possibilities to assist in the identification of relevant research, thereby reducing the amount of effort expended on screening items that are irrelevant. CASE has supported their use throughout the length of this project. It is worth remembering, however, that these methods and tools are in the early stages of development and the process of developing a robust methodological and empirical evidence base for their use is ongoing (Thomas et al., 2011). It is important that all stakeholders (reviewers, users of the database, and funders) understand that application of text mining technologies to assist in identifying relevant studies has both strengths and weaknesses. Unless resources are unlimited (and perhaps even if they were) for a review of literature as broad as the CASE database it is not possible to identify every study report in the world that meets the inclusion criteria. The CASE database is a comprehensive collection of the culture and sport empirical literature, based on a systematic search. It cannot, nor can it claim to, contain everything.

Janice Tripney, EPPI Centre, Institute of Education, London, August 2012.

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Appendix 1: Search sources and strategy for the 2012 update

Bibliographic databases

Applied Social Sciences Index and Abstracts (ASSIA) (CSA)
 Arts and Humanities Citation Index (AHCI) (WoK)
 British Humanities Index (BHI) (CSA)
 Econlit (EBSCO)
 Education Resources Information Centre (ERIC) (CSA)
 International Bibliography of the Social Sciences (IBSS) (CSA)
 Medline (WoK)
 PsycINFO (EBSCO)
 Social Science Citation Index (SSCI) (WoK)
 Social Services Abstracts (CSA)
 Sociological Abstracts (CSA)

Specialist bibliographic databases

Impact Database (available through CCPR at the University of Glasgow)
 Physical Education Index (CSA)
 SportDISCUS (EBSCO)

Specialist journals

Cultural Trends
 Engage Journal
 Visual Culture in Britain

Websites of national and regional stakeholder organisations

Arts Council England
 Audit Commission
 Big Lottery Fund
 Cabinet Office
 Central Council for Physical Education
 Commission for Architecture and the Built Environment (CABE)
 Communities and Local Government (CLG)
 Craft Council
 Creative and Cultural Skills
 DEMOS
 Department for Culture, Media and Sport
 Department of Health
 English Federation of Disability Sport (EFDS)
 English Heritage
 Fitness Industry Association
 Her Majesty's Treasury (HMT)
 Heritage Lottery Fund (HLF)
 Leisure Studies Association
 Local Government Association (LGA)
 National Audit Office
 National Foundation for Educational Research
 Ofsted
 SkillsActive
 Sport England (including the Value of Sport Monitor)
 Sporting Equals
 Sports Coach UK
 UK Sport

Women's Sport and Fitness Foundation
Youth Sports Trust

Websites of UK research centres/departments/organisations

CultureMap London
Economic and Social Research Council Centre for Research on Socio-Cultural Change (CRESC)
Loughborough University: Institute of Sport and Leisure Policy
Scottish Government: Culture, External Affairs and Tourism Research Network
Sheffield Hallam University: Sport Industry Research Centre
University of Chester: Chester Centre for Research into Sport and Society
University of Glasgow: Centre for Cultural Policy Research
University of Leicester: Research Centre for Museums and Galleries
University of Newcastle upon Tyne: International Centre for Cultural and Heritage Studies
University of Warwick: Centre for Cultural Policy Studies

Websites of international research centres/departments/organisations

National Endowment for the Arts
North American Society for the Sociology of Sport
Social Impact of the Arts (University of Pennsylvania)
Canadian Council for the Arts
Canadian Heritage
Australian Council for the Arts
Australian Sports Commission
Council of Europe: Cultural Policy Research
European Commission: Sport
European Cultural Foundation

Research funding bodies

Economic and Social Research Council
Arts and Humanities Research Council

Websites (Impact Database search strategy)

Arts Education Partnership
Arts Management Network
Arts Professional
Arts Council (Ireland)
Americans for the Arts (Arts Watch)
Boekman Foundation
Comedia
Community Arts Network
Creative City Network (Canada)
Creative Exchange
Creative Partnerships
Culturelink
European Institute for Comparative Cultural Research (ERICarts)
Hill Strategies Research
The International Federation of Arts Councils and Culture Agencies (IFACCA)
Arts and Culture Online Readers News Service (ACORNS)
Interarts
Institute for Public Policy Research (IPPR)*
Joseph Rowntree Foundation*
LabForCulture
Museum & Society

New England Foundation for the Arts
NESTA*
New Economics Papers in Cultural Economics
Scottish Government Research Digest*
Scottish Museum Council
United Nations Educational, Scientific and Cultural Organization (UNESCO) (Culture)
The Urban Institute*
Wallace Foundation

Websites (CASE Board additional recommendations)

Sport Wales
Arts Council of Wales
National Museums and Galleries of Wales
Audience Wales
Creative Scotland
Museums Galleries Scotland
Arts Council of Northern Ireland
Audience Northern Ireland
Museum Council Northern Ireland
National Museum Northern Ireland
Sport Northern Ireland
Department of Culture Arts and Leisure (Northern Ireland)
Northern Ireland Screen

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