Leveraging the 2012 London Olympics for building research capacities in the UK Higher Education sector: Lessons for the 2020 Tokyo Games

FINAL REPORT

Vassil Girginov
Brunel University London

Naofumi Masomoto
Tokyo Metropolitan University

Keiko Homma
Tokyo Metropolitan University

November 2015

Table of Contents

Acknowledgements	3
Executive Summary	4
1. Introduction	7
2. Project aims and objectives	8
3. Understanding the link between the Higher Education sector, the Games and capacity building	9
4. Building the research capacity of the Higher Education sector	13
5. The UK Higher Education sector and the 2012 London Olympics	17
6. Podium: The Tertiary and Higher Education Unit for the 2012 Olympic Games	18
7. Method	24
8. UK Higher Institutions leveraging of the London Olympics	26
9. Higher Education institutions' general perceptions of the Games	34
10. Integrating Higher Education institutions' research and teaching strategies with the Games	35
11. Higher Education institutions' use of the Games for communications and raising public awareness	39
12. Higher Education institutions' use of the Games for resource generation	40
13. Higher Education institutions' use of the Games for improving governance	43
14. Higher Education institutions' role in Olympic knowledge generation	44
15. Higher Education institutions' involvement with Games-related programmes and partnerships	45
16. Higher Education institutions' main beneficiaries from the Games	47
17. Conclusion	49
18. Lessons for Tokyo 2020	52
19. References	56

Acknowledgements

The authors would like to register their appreciative thanks to the Daiwa Foundation for the financial support for this project, Jim Harris from Northampton University for designing the online survey, Matthew Halley from Podium for his assistance in contacting the Higher Education sector as well as all colleagues who have kindly agreed to be interviewed and generously shared their insights.

Illustrations by Atanas Atanasov.

Executive Summary

Purpose

This study was conducted by a team from Brunel University and Tokyo Metropolitan University and was supported by a grant from the Daiwa Anglo-Japanese Foundation. The overall aim of this report was to examine how the UK Higher Education (HE) institutions have leveraged the 2012 London Olympic & Paralympic Games to build their research and teaching capacities. More specifically, the report addresses *what strategies, processes and mechanisms have been used by the UK HE institutions to leverage the opportunities presented by the London Games*. As well, it draws lessons from London 2012 which can be considered by the Japanese HE community, which numbers some 782 universities with 2,868,872 students and 178,669 professors and 359 colleges with 138,260 students and 8,631 professors. The study is based on an online survey with HE institutions, personal interviews with leading academics and officials, document analysis and involvement with several major Olympic research and teaching projects.

Significance

The UK higher education sector is a major contributor to the economy with an output of over £80 billion, which equates to 2.8% of country's GDP, and supports more than 800,000 full-time jobs. Universities have been at the forefront of creating intellectual capital and economic value and the London Games were perceived as a great opportunity to help further enhance the role of the HE sector nationally and internationally.

For the first time in history, the 2012 London Olympics organisers made a concerted effort to involve the host Higher Education sector through a dedicated organisation, Podium. As a result, 94% of the UK HE sector became involved with the Games through various initiatives. However, there is a gap in our knowledge of how the UK universities have leveraged the Games for building their research and teaching capacities, so they continue to make major contribution to society. This study bridges between two distinct strands of knowledge – of leveraging of mega events (i.e., the Olympics) and that of organizational capacity building, and creates new knowledge.

Key findings

Our research shows that there were five major concerted UK-wide collaborative initiatives designed to promote Olympic research, teaching and learning within the HE sector and beyond:

- Establishing by the world leading academic publisher, Routledge an Online Studies of the Olympic & Paralympic Games interactive platform and making more than 30% of the content or over 300 refereed academic articles freely available to the academic community (http://www.routledgeonlinestudies.com/);

- Developing by an Oxford Brookes University-led research group of Learning Legacies - a dedicated platform containing a range of resources designed to aid the teaching and learning of Olympism internationally;
- Organising by *a Brunel University London-led Consortium of five UK Universities (*Liverpool John Moores, Strathclyde, Scotland, ULSTER, Northern Ireland and UWIC, Wales) the world's premier Scientific International Convention on Science, Education and Medicine in Sport in 2012 in Glasgow, which attracted over 2,000 participants from 78 countries;
- Conducting the first ever multi-dimensional study of a single Olympic Games with the participation of 56 researchers from 30 universities (Handbook of the London 2012 Olympics-Volumes 1, 2012 & 2-2013, Routledge, V. Girginov- Editor);
- Launching a comprehensive focused publication programme with Routledge involving over 40 academic journals across humanities and social sciences, which resulted in the publication of 174 papers by 308 authors from 19 countries.
- The research reveals that the UK Government Research Exercise Framework policy that governs research in UK universities and the timing of the Games have worked largely against establishing coherent long-term research and teaching strategies at institutional level;
- The sector's leveraging of the Games was more evident on a tactical basis via engaging with specific projects such as hosting pre-Games training camps and putting on new courses;
- 32 Olympic research projects were funded by the main UK Research Councils (2003-2014) generating a combined income of nearly £8 million or on average of £250,000 per project;
- The two research themes that have attracted investigators from over half of the respondent institutions were 'the link between the Games and sport participation and athletes' performance' and 'Olympic impacts and legacies';
- The main beneficiaries from the leveraging of the Games were selected staff members (87%), followed by selected departments (67%), research centres (60%), and the institution as a whole (53%);
- However, similar to previous host countries, and despite some creative initiatives, the UK academic community has largely failed to bring educationalists together and to produce any educational policy breakthroughs that would significantly alter the standing of Olympic-related research and teaching;
- Six main leveraging processes for capacity building were utilized by universities: (1) enhancing students' experiences through new courses, research and teaching materials and other resources and enabling unique interactions; (2) post-graduate studies development by providing tailored scholarships and opportunities for participation in Olympic research projects; (3) consultancy to various government, charitable and commercial agencies, and Games organizers; (4) image building through showcasing Olympic-related research, teaching and students' sporting achievements and outreach community work; (5) resource generation through research activities and service provision; and (6) forging partnerships with public, non-for-profit and commercial agencies;
- The main leveraging mechanisms for capacity building employed by HE institutions included submitting research grant applications that allow building intra-and inter-

organisational capabilities and synergies, launching new course offers, public engagement through open series lectures, students and staff volunteering for the Games and beyond, organising conferences and workshops for knowledge dissemination and sharing, and tapping into national and local Olympic programmes;

- The core HE institutions' capacities that have been most positively affected by the leveraging of the Olympics were the capacity to achieve developmental results and to relate. As a result, a number of staff and organisational units have been able to engage with partners and projects leading to greater individual and collective empowerment;
- The main capacity building approaches used by HE institutions include capacity grants (e.g., research grants and institutional scholarships), working with development partner (e.g., SHU-LOCOG or with local/regional partner) and structured programmes (e.g., Games volunteering, Cultural Olympiad);

Lessons for Tokyo 2020

- Analysing the existing policy regulation of research and its alignment with Olympic research strategies is an essential precondition for long-term success;
- Demonstrating the impact of research is critical for gaining institutional and financial support from public, voluntary and commercial sectors;
- Establishing national/local guidelines for promoting Olympic studies and developing 2-3 large scale projects designed to create open access data bases and teaching resources for undergraduate and post graduate students;
- Aligning teaching strategies with national and local Olympic programmes to ground the curricula in real Olympic examples and to enhance students' experiences;
- Integrating teaching with research and wider community engagement to multiply the positive effects for students, staff and institutions;
- Ensuring organisational commitment to Olympic research and teaching initiatives as early as possible;
- Establishing a university-wide steering group to coordinate various activities and resources;
- Demonstrating the impact of research and teaching is critical for gaining and sustaining institutional and government support;
- Olympic enthusiasm has proved short-lived and there has been a tendency for Games' initiatives to fade away after the Olympics have ended. It is therefore, critical to integrate the core Olympic research and teaching activities with organisational long-term strategies to ensure their sustainability.

A limitation of the report is the lack of in-depth case studies to reveal the specific leveraging processes and mechanisms responsible for building specific research and teaching capacity.

1. Introduction

While the link between academia and the modern Games can be traced back to the late 19th century and the work of the founding figure Pierre de Coubertin, recently, and after the 2012 London Olympics in particular, this topic has generated increasing interest not only among Games organisers and the Higher Education (HE) sector, but in political and economic circles as well. It is, therefore, important to understand this relationship and how it can be successfully leveraged to the benefit of the host country's HE community and the Games.

For the first time in history the 2012 London Olympics organisers made a concerted effort to involve the host Higher Education sector through a dedicated organisation, Podium.

For the first time in history the 2012 London Olympics organisers made a concerted effort to involve the host Higher Education sector through a dedicated organisation, Podium. Podium's role is to work with key stakeholders and alongside the Games authorities to communicate Games related opportunities, support the development of programmes and share examples of good practice across the sector. As a result, 94% of the UK HE sector became involved with the Games through various initiatives. However, there is a gap in our knowledge of how the UK universities have leveraged the Games for building their research and teaching capacities.

The Olympics presents the host country with unique opportunities because they help mobilize significant resources that can be strategically used for capacity building. The purpose of this report is to analyse how the UK HE sector has leveraged the London Games to build institutions' research and teaching capacity. As well, to share the lessons from London 2012 with the Japanese HE community, which numbers some 782 universities with 2,868,872 students and 178,669 professors and 359 colleges with 138,260 students and 8,631 professors.

The modern Olympic Games were conceived by de Coubertin and his associates as an educational project aimed at bettering the world through sport. Thus, from the outset educational establishments were seen as the natural breeding ground where

the values of Olympism can be most effectively cultivated. For his project to be successful, Coubertin needed the help of educators and the involvement of students. Writing in 1919 he made the links between universities and his idea of 'Olympism' very clear:

> But it is also useful to him [the university student] in carrying out the social task which will lie ahead of him in the new society . . . *University students, messengers of knowledge and imagination, will constitute the most active battalions in this great task; let us say if you wish that they will have to be us aviators.* Now I have said, and I repeat, that sport by reason of its potent physical and moral effects will be an inestimable instrument in their hands for the establishment of social peace. They must therefore know how to handle it with tact and how to derive the maximum effect from it. *Popular Olympism is about to be born; let the students prepare to serve it* (Cited in Chatziefstathiou, 2012, p.186).

The above quote also highlights the social mission of universities and students, which goes well beyond the celebration of the Games as a sporting festival and charges them with the responsibility to prepare morally sound and physically active young leaders capable of building modern societies. However, in order to be able to more successfully fulfil their social mission universities need to have the capacity to develop new knowledge and teaching methods. Over the past five years UK universities have been going through massive transformations concerning their business model, which is now being increasingly based on charging tuition fees and devising strategies to respond to an ever growing political pressure for producing world class research and greater students' satisfaction.

2. Project aims and objectives

The overall aim of this project is to understand how the host HE institutions have leveraged the London 2012 Olympic Games to build their research and teaching capacities. Mega-sporting events, such as the Olympics, present not only a platform for showcasing athletes' achievements, but also a valuable strategic resource, which can be leveraged to enhance the HE sector overall capabilities. The forthcoming 2020 Tokyo Games provide this resource for the Japanese HE sector. More specifically, the

project addresses *what strategies, processes and mechanisms have been used by the UK HE institutions to leverage the opportunities presented by the London Games*.

3. Understanding the link between the Higher Education sector, the Games and capacity building

The link between an Olympic Games and academia is multifaceted and difficult to pin down in a neat description. As far as can be ascertained no similar studies exist. *The Contribution of the Higher Education Sector to the Sydney 2000 Olympic Games* (Cashman & Toohey, 2002) represents an encouraging first step in analysing the role of the higher and tertiary education in staging the Olympics. A key finding of this report suggests that despite some benefits for the academic community in Australia, the Games largely failed on two counts – to produce educational innovations and to bring educationalists together.

The involvement of the HE sector with previous Games has been multifaceted; ranging from academics serving on the Organising Committees and conducting research, to universities hosting pre-Games training camps, student volunteering, to the design and operation of different equipment and services needed at the Games.

Following this first report in 2002, several more studies on the subject have appeared in relation to the Beijing 2008 (Henry et al., 2008) and London 2012 Games (Weed et al., 2011, 2012). Graver *et al* (2010) analysed 52 educational programmes operated across the Summer and Winter Olympic and Paralympic Games, Commonwealth Games and FIFA World Cups since the 1992 Barcelona Olympics.

The above studies have demonstrated that the involvement of the HE sector with the Games has indeed been multifaceted ranging from academics serving on the Organising Committees in various capacities and conducting research, to universities hosting pre-Games training camps for National Olympic Committees, student volunteering, to the design and operation of different equipment and services needed at the Games. For example, more than half of the total 45 Australian universities in Sydney, NSW and the regions became involved with the Games in a

variety of activities. Over twenty memoranda of understanding were signed between higher education institutions and SOCOG, the Sydney Olympic Broadcasting Organisation (SOBO), the Australian Olympic Committee (AOC) and the NSW government. Three Olympic study centres were established in joint partnerships between universities and the AOC: the Centre for Olympic Studies at the University of South Wales in May 1996; the Centre for Olympic Studies at the University of South Australia in June 1996; and later in 2000 the Centre for Olympic Studies at the University of Queensland (Cashman & Toohey, 2002). Two Olympic Studies Centres at the UTS and Queensland exist today.

The 2008 Beijing Games have widened the scope of the involvement of the HE sector: university student volunteers directly involved in the Games totalled 77,169, with another 44,261 for the Paralympics; six Olympic venues were located in universities, eight major Olympic research centres were established, a range of conferences and cultural activities were organised, over 200 textbooks (academic, populist, basic, professional and subject-specific on Olympic venues and volunteer/staff positions) were published. A further example of an explicit education legacy is in Beijing 2008, where the proposal of a 'model schools' scheme involved some 200 schools in the project in Beijing and 500 engaged nationwide (Henry et al., 2008).

The most enduring contribution of the HE sector to the Olympics has been in leaving a range of educational legacies. Graver *et al* (2010) identified seven such educational legacies:

i) Increased participation in school sport and physical education
ii) Teaching the values
iii) Curriculum development
iv) Vocational training
v) Raising cultural awareness
vi) Upskilling volunteers
vii) Benefits for educational establishments

The involvement of the HE sector with the Olympics offers a number of advantages for Games organisers and the host country. First and foremost, universities offer a structured environment where large number of people can more effectively be mobilized around the Olympic message, and the natural enthusiasm of staff and students can be harnessed to support a range of Olympic projects. Secondly, the education resources of the whole country can be rationally allocated to complement the specific educational policies pursued by the Games. Equally, the Games create unparalleled opportunities for enhanced interactions between HE institutions and a myriad of public, voluntary and commercial agencies nationally and internationally.

Enhanced interactions offer academics and students a vast number of opportunities for involvement in a range of research projects, consultancy and public engagement initiatives concerning environmental, transport, security, technology, economic, communication and sport sciences aspects surrounding the Games. These interactions also make significant contribution to building individual and organisational capacities within the sector. Previous studies suggested that there were some challenges as well including increased competition between universities, lack of interest and capacity for engagement and poor coordination with the Organising Committees of the Games.

This study bridges between two distinct strands of knowledge – of leveraging of mega events (i.e., the Olympics) and that of organizational capacity building. Thus, it creates a new field of inquiry and thus new knowledge. The term 'capacity' generally refers to the ability of an individual, organization or a community to do something. It is a multi-dimensional concept which comprises both processes and structures as well as quantitative (e.g., presence of formal goals) and qualitative (e.g., staff evaluation regarding the achievements of those goals) dimensions (Sowa, Selden and Sandfort, 2004). Christensen and Gazley (2007) and Wigboldus, Nell, Brouwer and Lee (2010) extensive analyses of literature noted three contextual uses of capacity related to individual, organizational and nation-state levels. They also identified four main variables of capacity including human resources (e.g., motivation, knowledge base,

experience), external (e.g., relationships, trust, and domain logic), infrastructure (e.g., organizational culture, research, computers and IT) and financial (e.g., resources, assets, cost of labour). Capacity is also inseparable from the notion of capacity building as it is not a static property but one which is constantly evolving. Honadle (1981) noted that while capacity describes the means to performance, capacity building describes the organizational efforts to improve organizational means. In the context of higher education capacity building is both about recruiting sufficient research staff to the field, and enabling those people to progress so that they are able to sustain and develop their academic field at present and in the future. It is also about building inter-institutional collaborations so that academic research is able to thrive (Fowler et al, 2009).

Previous studies have revealed two broad approaches to understanding capacity building: (i) 'deficiency' which places the focus on identifying inadequacies in an organization in relation to its mission and designing a programme of actions to overcome them; and (ii) 'empowering' people and organizations to identify and address problems they face themselves by recognizing the value of local knowledge and skills by providing a supportive institutional and procedural framework to enable capacities to flourish. Blumenthal's (2003) typology of capacity building approaches including capacity grants, development partner (i.e., how the capacity building intervention is delivered) and structured programmes (i.e., the nature of the intervention–short-long-term, narrow-broader focus) has been widely accepted in the literature for non-profit organizations. Cornforth and Mordaunt (2011) extended this typology by a fourth approach called 'engaging' capacity where organizations whose capacity is being developed play a greater role in selecting and managing the external help received as well as the capacity building process as a whole.

Capacity is interpret as an emergent combination of attributes, assets, capabilities and relationships that enables an organisation and its members to perform, develop and self-renew and to create developmental value (Zinke, 2006). The present study builds on Zinke's (2006) framework, which allows for capturing both

the processual and structural dimensions and the three levels of capacity building including individual, organizational and community. Moreover, the project is concerned with capacity as empowering and engaging (Cornforth and Mordaunt, 2011) as HEFCE have been promoting greater autonomy and better governance of universities. In the context of this project *organisational capacity* will be interpreted as**:** HE institutions' organisational capacity represents an emergent combination of attributes, assets, capabilities and relationships that enables them and their members to perform, develop and self-renew, as well as to create developmental value. Capacity involves five core separate but interdependent capabilities including the *ability to act, to generate development results, to relate, to adapt and self-renew and the ability to achieve coherence*.

While there has been a growing body of literature on leveraging mega events (Beesley & Chalip, 2011, Getz, 2009, Girginov & Peshin, 2015, Grix, 2014, Jago et al, 2010, Karadakis et al, 2010, Smith, 2010) there are virtually no studies on HE institutions' engagement with the Olympic Games for capacity building. The project follows Chalip's (2004) model for host community event leverage concerned with leverageable resources, opportunities, strategic objectives and means before, during and after the Games. Thus, the leveraging of the Olympics represents a multidimensional form of capacity building as its ultimate purpose, according to Chalip (2004, p.228), involves "those activities that need to be undertaken around the event itself, which seek to maximize the long-term benefits from events". In the context of the Olympics, leveraging represents a multidimensional form of capacity building. This involves those activities that need to be undertaken around the event itself with the ultimate goal to maximize the long-term benefits from the event and to enhance HE institutions' research and teaching performance.

4. Building the research capacity of the Higher Education sector

The UK higher education sector contributed an output of over £80 billion and more than 800,000 full-time jobs in 2013 to 2014. This equates to 2.8% of gross domestic

product (GDP) - up from 2.3% in 2007 to 2008. The HE sector generates economic value through a range of activities, the most significant of which is research (see Table 1). Therefore, the universities have been at the forefront of creating intellectual capital and economic value and the London Games were perceived as a great opportunity to help further enhance the role of the HE sector nationally and internationally.

Table 1. Key indicators from the HE-BCI survey – 2003-04, 2008-09 and 2010-11

Income (£ millions real terms)	**2003-04**	**2008-09**	**2011-12**
Collaborative research	541	732	871
Consultancy	211	332	398
Contract research	577	937	1,113
Continuing professional development (CPD)	219	383	426
CPD and continuing education	76	176	225
Facilities and equipment-related services	80	110	139
Intellectual property	38	124	79
Regeneration and development programmes	216	172	180
Number	**2003-04**	**2008-09**	**2011-12**
Number of disclosures	3,029	3,822	4,294
Number of new patent applications filed	1,308	2,097	2,274
Number of patents granted	463	653	826
Formal spin-offs formed	167	194	191
Formal spin-offs formed which have survived three or more years	688	982	998

Source: Kelly *et al*. (2014)

Capacity building has long been recognised as one of the main priorities in the HE sector, which is evidenced in a plethora of research and policy documents (e.g., the government's *'Higher Ambitions',* November 2009) and The Royal Society's *'The Scientific Century'* (March 2010). These reports identify the need of highly skilled people that would enable the UK to flourish in the knowledge economy. As Hooley, Kent and Williams (2010, p.3) remark "This increased attention to the development of researchers' skills may be seen as an extension of the 'supply-side' focus that has characterised UK education and employment policy since the 1980's (cf. Grubb and

Lazerson, 2006; Ball 2008). Broadly speaking, this approach is built on the premise that the way to build a high skills economy and, in this case the research capacity of the UK, is to develop people and their skills". A particular example illustrating this policy is the Teaching and Learning Research Programme (TLRP) set up in 1998 and funded by the Economic and Social Research Council (ESRC), which was the first of the ESRC's investments in social sciences to explicitly identify research capacity building as one of its principle purposes.

Our understanding of HE institutions' research capacity building would not be complete without proper consideration of the strategic framework within which UK universities are expected to conduct research. At the time of the launch of the London Olympic bid in 2002/3, the quality of academic research in the UK was originally assessed through the Research Assessment Exercise (RAE, 2008) and then by the Research Excellence Framework (REF, 2014). These government audits were conducted jointly by the Higher Education Funding Council for England (HEFCE), the Scottish Funding Council (SFC), the Higher Education Funding Council for Wales (HEFCW) and the Department for Employment and Learning, Northern Ireland (DEL). The quality of outputs is assessed on a 4 point scale (**4*** Quality that is world-leading in terms of originality, significance and rigour; **3*** Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence; **2*** Quality that is recognized internationally in terms of originality, significance and rigour, and **1*** Quality that is recognized nationally in terms of originality, significance and rigour). Both frameworks, as well as their predecessor, have had significant impact on universities' research strategies because the results determine how much research funding they are granted (i.e., quality-related research- QR). For example, the REF 2014 results were used as criteria for allocating £2bn a year, as well as to determine institutions' rankings in league tables. The practical consequences of REF have been significant: a poor performance can close a department, while a top rating means steady research funding.

Although virtually all UK HE institutions were involved in the recent REF 2014 (154 Universities took part with a total of 190,000 submissions by 52,000 academic staff), this framework has been controversial for a number of reasons: it creates competition amongst institutions for the same pot of funding (for example, 39 institutions entered the sport studies unit of assessment in RAE 2008 and 51 the 2014 REF); it has also been estimated that in the run up to the audit, institutions have spent £47m polishing their submissions and critics have argued that these taxpayer money could have been better spent in the classroom; HEFCE's decision not to fund outputs ranked below 3* in 2010 led many institutions to develop "internal REFs" to filter potentially low-scoring work from their submissions, thus excluding potentially innovative outputs produced by young researchers in particular; REF perpetuates the divide between research-intensive universities (almost 85% of HEFCE's quality-related funding in 2013 went to Russell Group of 24 leading universities http://www.russellgroup.ac.uk/our-universities/) and the reminder of the field, thus creating a context which does not encourage collaboration between institutions.

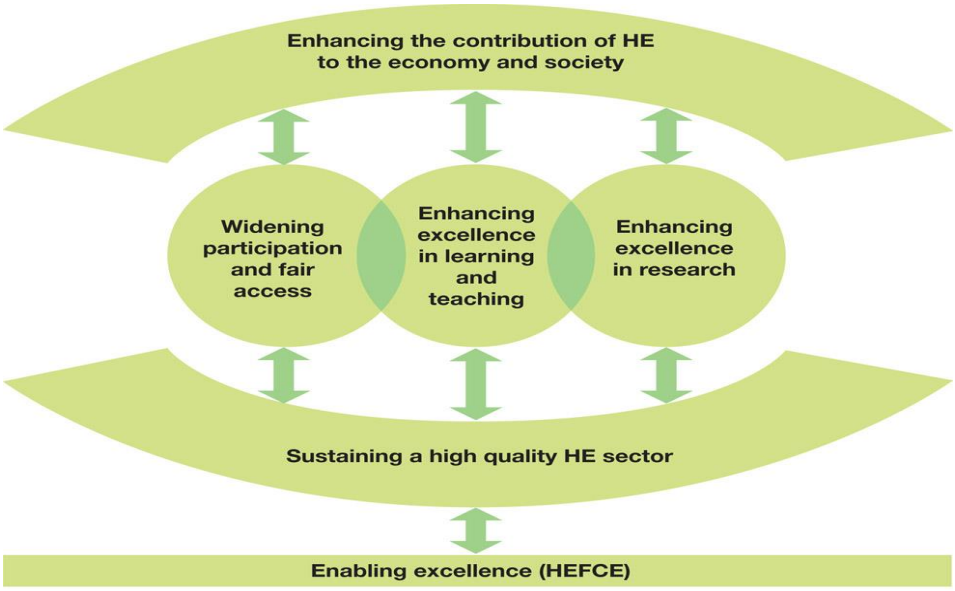
The time scale of the UK research assessment frameworks (2008-2014) was such that it did not specifically stimulate Olympic-related research.

Further, the time scale of both research assessment frameworks was such that it did not specifically stimulate Olympic-related research. Institutional submissions for the 2008 RAE were due in November 2007, which means that academic staff should have nominated their outputs by late 2006, or only a year after London was awarded the Olympic Games in 2005, which makes virtually impossible to include any Olympic research. Although the results of the audit were announced in December 2008 the funding allocations were not made until 2009-10, which again has made any London Olympic-related research planning very hard. Similarly, the 2014 REF submissions were due in November 2013, which given the time needed to analyse and publish the results of any university-funded research around the London Olympics precludes it from inclusion in the assessment.

5. The UK Higher Education sector and the London 2012 Olympics

The connection between the London Games and the HE sector also ought to be analysed in the context of the sector's strategic mission. In 2006 The Higher Education Funding Council of England (HEFCE) has developed a strategic document, which set out the main priorities of the sector, and the Games were seen as both an opportunity and a challenge for delivering these priorities. These include widening participation and fair access to higher education, achieving excellence in research, and enhancing the contribution of HE to the economy and society (see Figure 1).

Figure 1. HEFCE strategic priorities 2008-2015



Source: HEFCE (2008)

HEFCE saw their role as informing, co-ordinating and facilitating, to ensure the sector doesn't miss out on any opportunities and avoids duplicating work. This translates into event specific activity such as supporting Great Britain's push for medals by providing additional flexible learning places for athletes to get into HE at the top universities for sport.

HEFCE (2007) also noted that some universities have focused on the event itself, but much of the sector sees that there is enormous potential to promote areas such as widening participation, business development and knowledge transfer, cultural contributions, and the contribution that HE can make to public health. In this way higher education institutions (HEIs) can extend existing activities and identify new areas of work which will have a life after the Games are over – providing a lasting legacy. The next section discusses more specifically the relationship between the London 2012 Olympic and Paralympic Games and the Higher Education (HE) sector in Britain.

6. Podium: The Tertiary and Higher Education Unit for the 2012 Olympic Games

Concept and vision

In its bid to the IOC for the 2012 Olympics, London has made a commitment to change the lives of young people in Britain if awarded the Games. As a result, consistent efforts have been exerted to determine the most effective way to engage the HE sector in the planning and staging of the Games. After extensive consultations with the sector, London Higher submitted a funding proposal to the Higher Education Funding Council for England (HEFCE) and the Learning and Skills Council (LSC) for the establishment of Podium, an organisation that would act as the further and higher education unit for the 2012 Games. The proposal was successful, and Podium was established in 2007 with two major aims *(HEFCE, 2007: 4–5)*:

- to communicate both within the sector and with outside agencies the potential for universities and colleges to support the successful staging and delivery of the 2012 Games;
- to coordinate development of activity within the sector that maximises the benefits of hosting the 2012 Olympic and Paralympic Games in this country, contributing to the building of a sustainable and wide-reaching legacy.

Governance

Although Podium was established by London Higher it has a nationwide remit but because of the UK administrative arrangements, only projects and activities delivered

in England were eligible for support. Podium is directed by a steering group which includes heads of HEIs and further education (FE) institutions throughout England, and has HEFCE, LSC, LOCOG and DCSF representation. Podium's strategic direction was shaped by a Board and Chaired by Professor Geoff Petts, Vice-Chancellor of the University of Westminster. The day to day work of Podium was carried out by a small team of three paid officers who were based in an office in central London.

Shortly after it was established Podium has set up five action groups, led by HE Institutions, with members from across the HE and FE sectors nationally to share good practice and scope the opportunities for the sector's engagement in the Games. The groups provided a source of expertise in Active participation in sport, the Cultural Olympiad, Business and enterprise, Skills and employability, and Community engagement. It should be noted that the Managing Director of Podium was also recruited as a staff member of LOCOG and had worked for both organisations, thus ensuring a greater coordination in achieving its strategic objectives.

Funding

Podium is a non-profit public organisation, which was jointly funded by grants from the HEFCE, HEFC of Wales and the Skills Funding Agency. In 2013 it was offered some transitional funding by the same agencies to allow its work on the Games legacy to continue. However, from 2013 Podium was being funded almost exclusively by institutional subscriptions of £499 annually. In addition to the funding provided to Podium HEFCE also offered funding to five groups of strategic projects designed to advance its agenda in specific regions of the country (see excerpt 1).

Activities and programmes

Podium has developed a diverse portfolio of activities and programmes, which can be grouped under two main categories – communication and coordination of activities - pertinent to its main organisational aims. Podium *communications* were carried out through four main channels including a dedicated professional website

(www.podium.ac.uk), Podium Spotlight Magazine, Monthly Newsletter (eMail) and FE Newsletter (eMail). In 2009 Podium had 3,800 subscribers to its Newsletter. Figure 2 shows the HE and FE sectors awareness of these communication channels. By 2012 some 70% of the HE sector had ranked the communication activates of Podium as good and very good and only 2% thought these were poor (Weed, et al., 2012). Raising awareness about Podium and its mission has been identified as a major challenge for the organisation and this was an aspect of its work that was subjected to constant improvement.

Excerpt 1. Examples of strategic Games-related projects funded by the HEFCE

Creative Campus – led by universities in the South East
Creative Campus aims to create a lasting legacy of social, economic and cultural collaboration within higher education by bringing young people together from diverse cultural backgrounds in the production of new and innovative forms of creative and performing arts.

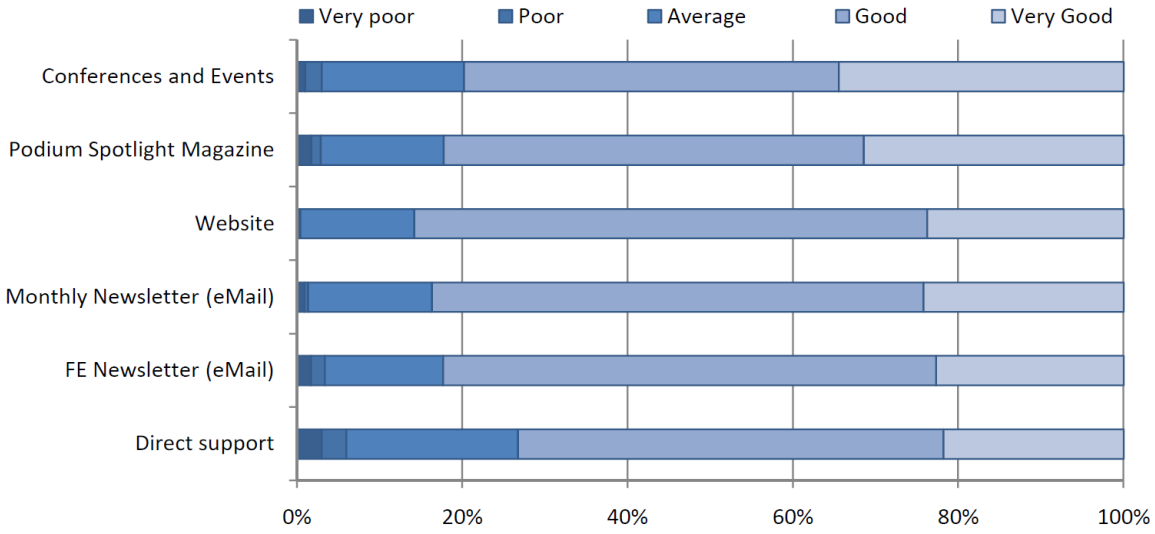
Regional Educational Legacy in Arts and Youth Sports (RELAYS) – led by universities in the South West
RELAYS aims to create a lasting legacy of engaged and upskilled young people, improved education provision, new sustainable festivals and events, an enhanced regional cultural tourism offer and successfully engaged businesses.

Volunteering 2012 – led by universities in the North West
Volunteering 2012 aims to facilitate the development and delivery of higher-level sport volunteering and coaching skills to meet the needs of North West sport community partners.

Tackling Social Inclusion issues – led by Sports Universities in North East England (SUNEE)
SUNEE aims to enable the universities to make a step change in the way in which their community engagement and outreach activities contribute to tackling social inclusion issues.

During the Olympic Games, Podium produced a Breakfast Bulletin and a Games Experts bulletin every day and a newsletter every other day including weekends – a total of 34 communications in 20 days. Five freelance reporters, all of whom were students or recent graduates, were employed during this period to help produce content for these newsletters and bulletins.

Figure 2. Stakeholder's Ratings of Aspects of Podium's work



Source: Weed et al. (2011)

The *coordination activities* of Podium have taken three main forms including conferences, events and direct support for small projects run by groups and universities. Typically, Podium was running around 20 conferences per year in addition to thematically focussed events and workshops looking at specific issues around the Games including technology, volunteering, catering, security and Pre-Games Training Camps. These events were organised in different parts of the country and have allowed hundredths of participants and university officials to take part and better understand the opportunities offered by the Games. Podium also offered on a competitive basis direct funding of up to £2,100 to 10 projects annually.

Four project devised by Podium deserve particular attention as they represent four different strands of the engagement of the HE sector with the Games that offered a range of opportunities for capacity building. The first project concerns the creation

of work opportunities for students. To this end Podium has worked with London 2012 and Adecco (a job recruitment agency) to design dedicated website before attending more than 60 fresher's and jobs fairs around the UK to give students the best chance of filling the roles. The website is the one-stop-shop for students to register for their chance to fill the 100,000 paid roles helping to deliver the London 2012 Olympic and Paralympic Games. All of the jobs pay a minimum of £8.30 per hour (the legal minimum wage in Britain) and many of the roles were at the London 2012 venues working for the contractors responsible for retail, catering and cleaning.

The second project was introduced in late 2011 to specifically engage academics from the HE sector by establishing a free-to-use, not-for profit, online database of more than 400 Olympic and Paralympic experts from the UK's FE and HE sectors. It was given official approval by London 2012 and was promoted in the Main Press Centre on the Olympic Park during Games-time. This data base was used by the world's media in the build-up to and during the London 2012 Games to gain authoritative interviews on all the latest news. Podium's online database called Games-Experts.com (www.Games-Experts.com) allowed the world's media and academic community to search for and contact professionals who have experience of working on and researching a diverse range of issues related to the Olympic and Paralympic Games.

Podium's third project called 'Key Seats Programme', was actually developed by LOCOG as an ad hoc programme as a response to the empty top seats on many Olympic venues. Those seats had become available because they were originally allocated to top sponsors and VIPs who, however, were either not interested in the sports being played or were not able to take advantage of the tickets that were made available to them. LOCOG were monitoring the seats occupation on a daily basis and through Podium would offer university students a significant number of top tickets on a daily basis on the condition that students must turn up well-dressed at certain times and locations. In this way LOCOG were able to fill up the venues and to avoid media criticism for not allowing the British public to experience the Games by offering them the chance to buy tickets. However, in partnership with the LOCOG

Education team Podium also worked to expand the Ticket share programme to the FE and HE sectors and managed to allocate more than 8,000 free tickets to institutions across the UK to watch men's and women's Olympic football.

The final project initiated by Podium in 2010 was the University week, which was specifically designed to celebrate the involvement of the HE sector with the Games. The week culminated with Podium Awards, a prestigious ceremony, organised in partnership with LOCOG and Research Council UK, where university and academics' work in 10 different categories of activities was recognised. Overall some 20,000 HE and FE students took some part in the Games and 94% of HEIs in England and Wales were engaged in the Games in some way or another. However, the geographical distance of some universities from London was a factor for the lack of involvement with the Games – the farther from the Games' location the lesser the involvement. This was particularly true for students who wanted to volunteer as LOCOG did not offer any support with travel and accommodation, which had made the cost of volunteering prohibitive for many students.

The role of Podium in the post-Games period

The contribution of Podium in the run up and during the London Olympics was recognised by the government, LOCOG and HEFCE and a decision was taken to continue its work. As a result, since the end of the London 2012 Games, Podium has repositioned itself as the unit for engaging colleges and universities with future sporting, cultural and educational mega-events including the Rio 2016 Games; Glasgow 2014 Commonwealth Games; 2013 Rugby League World Cup; and other major events such as the London Anniversary Games. The post-Games role of Podium is also justified by the fact that the UK hosts some 80 major sporting events annually, to which the HE sector can make an important contribution. Podium was also able to pass on its experiences to Brazil where eight

Podium has followed two main approaches to capacity building of the HE sector including a range of structured programmes and small grants. However, from January 2015 its existence was discontinued.

universities in the state of Rio have worked in partnership with the Brazilian Ministry of Education to establish a unit similar to Podium for the Rio 2016 Game. In sum, Podium has followed two main approaches to capacity building of the HE sector including a range of structured programmes and small grants. However, owing to the lack of funding and concerns that institutions are benefiting from the services provided by Podium without making a contribution to the organisation, from January 2015 its existence was discontinued.

7. Method

Following the conceptualisation of organisational capacity and leveraging, the project utilised a mixed method explanatory approach for data collection (Creswell, 2012). More specifically, a desktop-based literature review was undertaken covering all major scientific data bases including the Web of Science, Scopus, Sport Discus and Business Primer. Another major source of information was the annual reports of all UK Research Councils from 2005, when London was awarded the Games until 2014, with the view to identify Olympic-related funded research projects, themes and research groups. Unfortunately, we were unable to get access to Podium biannual reports as these were regarded as confidential and not available for public scrutiny.

To capture the leveraging of the Games for capacity building, an online survey was developed including 38 questions grouped in 7 sections pertinent to various aspects of HE institutions' capacity (https://docs.google.com/forms/d/1ZiaJ0-TP5f77hJ0wczHsPkAraN-W_zi6zJjUno7tIAU/viewform?c=0&w=1). With the help of Podium former Director, an invitation to participate in the survey was sent out to all HE institutions followed by two reminders. The questionnaire was answered by 15 universities or 10% of the total population of HE institutions.

Personal interviews were held with the former Chair and Director of Podium, and with leading academics from the Universities of Oxford Brookes, Bournemouth, Surrey, Sheffield Hallam, Christ Church, Leeds and Brunel who were actively involved with the

London Games and knowledgeable about their institutions' Olympic activities. Interviews were complemented by the lead author's personal observations and discussions with leading academics from the Universities of Strathclyde (Scotland), Liverpool John Morse (England), Cardiff Metropolitan University (Wales), Ulster (Northern Ireland) and Coventry (England) over a four-year period (2008-2012). Table 2 shows the conceptualisation of organisational capacity and its operationalisation by the study.

Table 2. Relationship between organisational capacity area, core organisational capabilities and study questionnaire

Core Organisational Capabilities	**Capacity area**	**Questionnaire items**
To act	Organisational skills development	Section 3, 6, 7
	Human resources development	6, 7
To adapt and self-renew	Organisational structure development	Section 1-2, 7
	Knowledge creation	3, 5
To achieve coherence	Governance	Section 2 -4
To generate development results	Aspirations creation Systems and infrastructure building	Section 2 -3, 7 5, 6
To relate	Aspirations creation Knowledge creation Organisational structure development	Section 3, 5, 7

8. UK Higher Institutions leveraging of the London Olympics

Studies conducted before the London Olympics suggest that HE institutions engaged with the Games for a number of reasons including increasing participation in sport, enhancing organisational profile, hosting pre-Games training camps and volunteering but research and knowledge generation were not a priority for them (Podium, 2011). Figures 3 and 4 show the most ambitious pre and Games time projects developed by the sector. As evident, sport-related projects dominated over other activities, but a number of institutions had engaged with volunteering, education and research projects as well.

HE institutions engaged with the Games for a number of reasons including increasing participation in sport, enhancing organisational profile, hosting pre-Games training camps and volunteering but research and knowledge generation were not a priority for them.

It is also clear that there was a significant gap between institutional ambitions and reality as the type and number of delivered projects was very different from what was originally expected. Overall, 65% of the respondents expect that their involvement with the Games will deliver a legacy benefit for their institution, specifically one of lasting partnerships. The main new partners to have been gained through Games-related activity are local authorities, fellow higher education institutions, the London Organising Committee of the Olympic and Paralympic Games, and schools (Weed, et al., 2011, 2012).

Figure 3. Most important strategic ambition for Games-related in HE and FE

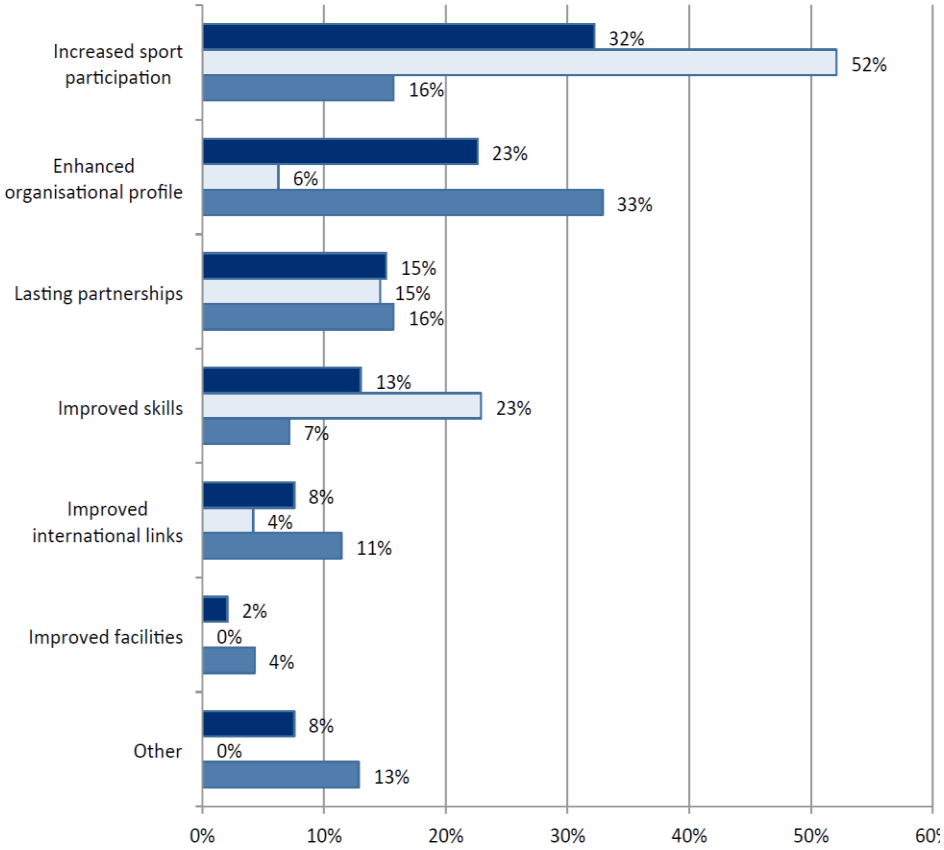
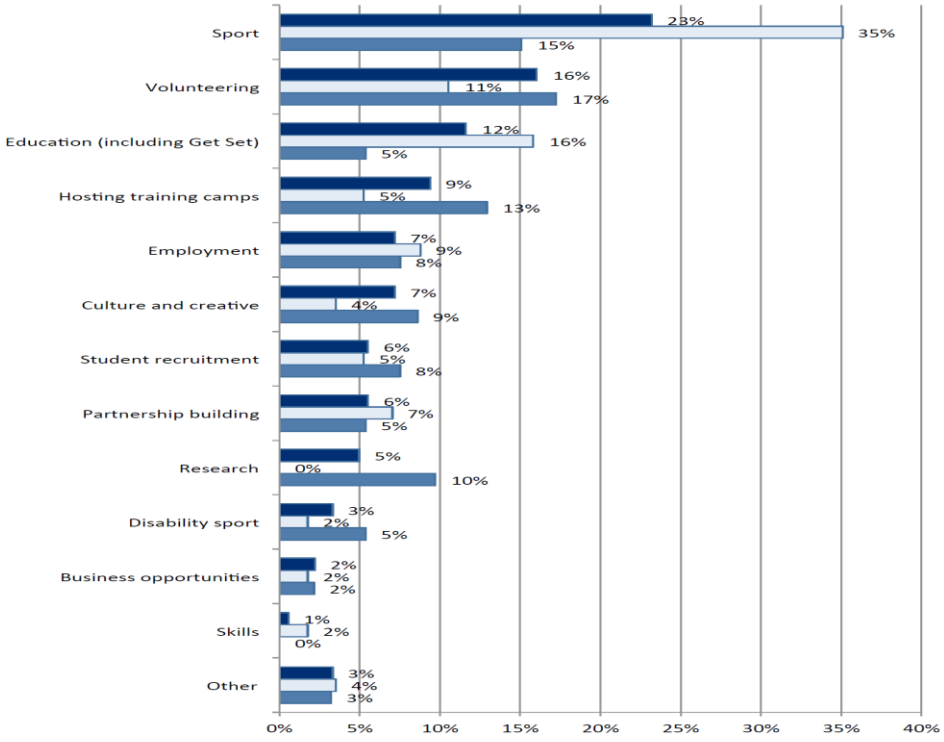


Figure 4. Most important activity in Games year in HE and FE



Source: Weed et al. (2011, 2012)

Only 10% of the surveyed institutions were involved with Olympic-related research activities. These activities, however, were rather opportunistic and *ad hoc*, and do not reflect a strategic and sustained approach to systematically engage with specific themes or group of researchers. In contrast to previous Olympic host countries, UK has only one Centre for Olympic Studies and Research based at Loughborough University (COSR). COSR did not initiate any significant nation-wide research or educational activity apart from one-off gathering of representatives of Olympic Studies Centres from different countries in July 2012, but this meeting failed to produce any meaningful results.

Only 10% of the surveyed institutions were involved with Olympic-related research activities. These activities, however, were rather opportunistic and *ad hoc*, and do not reflect a strategic and sustained approach to systematically engage with specific themes or group of researchers.

There were five major concerted UK collaborative initiatives designed to promote Olympic research, teaching and learning within the HE sector and beyond. First, in 2010 in conjunction with the world leading academic publisher, Routledge, an Online Studies of the Olympic & Paralympic Games interactive platform dedicated to the study of Olympism (http://www.routledgeonlinestudies.com/) was established. The Platform proved extremely popular around the world, receiving between 1,500-2,000 unique hits each month. To promote access and interest in the field the publisher made more than 30% of the content or over 300 refereed academic articles freely available to the academic community. This project allowed HE institutions to tap into additional resources made available by a commercial organisation to enhance individual and organisational research and teaching capacities.

Second, an Oxford Brookes University-led research group made up of scholars and project managers from several UK institutions developed *Learning Legacies*. This is a JISC (Joint Information System Committee)-funded dedicated platform, which contains a range of resources primarily designed to aid the teaching and learning of Olympism internationally. It includes resource guides, case studies, discussion starters,

research papers and other supporting materials and links (https://radar.brookes.ac.uk/radar/access/hierarchy.do?topic=b21b8897-ee8c-eca2-831a-7c59f261f511&page=1). Similar to Routledge's Olympic Online Studies Platform, it served the academic community by providing well-structured teaching materials on a range of topics.

Third, *a Brunel University London-led Consortium of five UK Universities including* Liverpool John Moores, Strathclyde (Glasgow), ULSTER (Northern Ireland) and UWIC (Wales) organised the world's premier Scientific Convention ICSEMIS 2012 (International Convention on Science, Education and Medicine in Sport) in Glasgow which attracted over 2,000 participants from 78 countries. In addition, 40 scholarships were provided to researchers from developing countries to attend the Convention and 10 young investigators' awards were allocated, and some 65 student volunteers were trained and involved with the event. As well, ten Podium-funded public engagement events designed to promote sport sciences were held. The Convention provided an ideal forum for knowledge exchange and interactions among scholars from all over the world. It also enabled the host organisations to mobilise their resources and staff and to enhance their overall organisational image.

Fourth, a research-centered project was launched including producing the first ever multi-dimensional study of a single Olympic Games with the participation of 56 researchers from 30 universities (Handbook of the London 2012 Olympics-Volumes 1 (2012) & 2-2013, Routledge, V. Girginov- Editor). Finally, a comprehensive focused publication programme with Routledge was established involving over 40 academic journals across humanities and social sciences, which resulted in the publication of 174 papers by 308 authors from 19 countries. A thematic and bibliometric analysis of Routledge special Olympic journal issues is available at the link below (http://www.tandf.co.uk/journals/explore/Olympic-Special-Issues-Analysis.pdf). These projects have helped individual researchers and HE institutions to enhance their ability to aspire and relate as well as to produce developmental results.

Funding Olympic research

UK HE institutions have been under political pressure to generate research income, which is used as a key measure for the quality and effectiveness of their research activities. Research income obtained from the UK Research Councils is considered particularly prestigious. Table 3 presents the Olympic-related grants awarded by one of the four main Councils for the period 2003-2014. A total of 32 projects were awarded, or on average three projects each year, with the majority of them by the ESRC (34%), followed by EPSRC (28%) and the AHRC (19%). None of the projects was concerned with the Olympic Games other than London. The Olympic 'legacy' was the most popular topic with 16 projects or 53% of all funded projects. It was followed by 'Science/Technology' (9 projects) and 'Event management' (4 projects). Other topics included 'Coaching', 'Economic impact' and 'Media' (one project each respectively). The majority of the projects were conducted by a single or a couple of researchers, and only three projects were interdisciplinary involving three of more researchers from three or more institutions. However, there were no multidisciplinary projects and their average duration was of two years. The relatively short duration of the majority of projects implies that there were very limited opportunities for the involvement of new PhD students with the research.

Research income obtained from the UK Research Councils is considered particularly prestigious. Table 3 presents the Olympic-related grants awarded by one of the four main Councils for the period 2003-2014. A total of 32 projects were awarded, or on average three projects each year, with the majority of them by the ESRC (34%), followed by EPSRC (28%) and the AHRC (19%).

The study also analysed the Olympic research grants provided by the main Japanese Research Council, the Japan Society for the Promotion of Science (so-called 'Kaken'), which is governed by the Ministry of Education, Culture, Sports, Science and Technology. Of the 10-funded research projects, eight were awarded by Kaken and only two projects were funded by private organisations. Interestingly, 60% of the projects were concerned with the 2012 London Games and four projects (40%) focused on the 2020 Tokyo Olympics. Of the London projects two were on culture, and one on legacy-tourism, media, sport management and sports policy each. The total

value of the six awarded projects was ¥23,400,000 (£126,000[1]). The four 2020 Tokyo-related projects included two on legacy-urban development, and one for legacy-culture and sports policy. These four projects were awarded a total of ¥28,430,000 (£154,000).

Table 3. UK Research Councils and IOC Olympic-related grants (2003-2014)

Funding Agency	**Project (No)**	**Project field, No projects**	**Project Duration**	**Amount awarded (£)**
ESRC	11	Event management -**4** Legacy-economy/health/sports-**1** Legacy-education-**1** Legacy-social/culture/health -**1** Legacy-tourism-**1** Science/technology-**1** Coaching -**1** Economic impact -**1**	2 years	3,013,392
EPSRC	9	Science/technology-**8** Legacy-education studies -**1**	2 years 1 – 5 years	4,260,810
STFC	1	Legacy-culture -**1**	6 months	9,800
AHRC	6	Legacy-culture-**5** Media studies-**1**	2 years	513,159
Leverhulme Trust	1	Visual culture of sport and the Olympic Games -**1**	1 year	N/A
British Academy	2	Legacy-culture -**2**	1 year	10,794
IOC	4	Legacy-urban development -**2** Legacy-culture-**1** Media studies -**1**	1 year	22,800
Total	**34**			**7,829,755**

Legend: Economic and Social Research Council (ESRC); Engineering & Physical Sciences Research Council (EPSRC)

[1] Based on July 2015 exchange rate of £1= ¥185

Research Council (EPSRC); Arts & Humanities Research Council (AHRC); Science & Technology Facilities Council (STFC); International Olympic Committee (IOC).

In addition to the 10-funded projects above there were eight other variously funded projects concerned with the Youth Olympic Games, Olympic education, sports policy or the 2016 Tokyo bid. Therefore, the grant research income generated by Japanese researchers related to the 2012 London and 2020 Tokyo Games was ¥51,830,000 (£280,000). If the eight other related projects are included, the total research amount increases to ¥91,600,000 (£487,000).

The grant research income generated by Japanese researchers related to the 2012 London and 2020 Tokyo Games was ¥51,830,000 (£280,000). If the eight other related projects are included, the total research amount increases to ¥91,600,000 (£487,000).

The research grants offered by the International Olympic Committee Olympic Studies Centre are designed specifically to support postgraduate students. The IOC grant scheme is a great opportunity for young researchers to conduct Olympic research by making the most of the IOC resources in Lausanne. Four 2012 London Olympics-related projects were awarded grants and there was no research related to the 2020 Tokyo Games. Of those four projects, two were on legacy-urban development, one on legacy-culture and one on media studies. Each project attracted CHF 8,000 (£5,700) or CHF32, 000 in total (£22,800).

However, several interviewees expressed concern about the lack of leadership in their universities with regards to putting forward a focused Olympic research strategy. While the Games naturally stimulated a great deal of enthusiasm among the academic community, in and of itself the excitement was not sufficient to embark on coherent research programmes delivered through cross-departmental collaborations. Owing largely to the REF framework, most universities have put in place rigid research strategies with little flexibility to include emerging opportunities such as those

presented by the Games. Furthermore, many academics preferred to concentrate on publishing 3* and 4* papers valued and funded by REF instead of risking engaging with exciting but 'no money earning' research. However, the general lack of cross-collaborative activities within UK universities was partly compensated by individual academics linking up with fellow scholars from wider research networks in the UK and abroad. These activities have resulted in various projects, academic outputs, public engagement events, conferences and workshops.

> Owing largely to the REF framework, most universities have put in place rigid research strategies with little flexibility to include emerging opportunities such as those presented by the Games.

For example, the University of Leeds has centered its London Olympic activities on a partnership with the Leeds Council and the Chinese Olympic Committee as the city played host to the Chinese Olympic team pre-Games training camp. The University has developed an Olympic programme and has appointed to that effect and Olympic Development Officer for a four year period (2008-2012). The main activities of the programme included an Olympic lectures series over four years each consisting of six public lectures aimed at the academic community and the general public. Another initiative was the creation of an Olympic summer school for international students to enable them to learn about English culture, language and sport. The University of Leeds also introduced an Olympic module ('Lead 2012') in the undergraduate curricula of sport students to educate them in Olympic matters. However, there were virtually no coordinated research activities related to London 2012 as most of the University of Leeds programme focused on public engagement and education (i.e., teaching) and commercial activities (i.e., hosting pre-Games training camps).

In total, 31 UK universities hosted pre-Games training camps for 38 different NOCs, which can be considered as a capacity-building activity because it generated additional income for the university, which can be invested in core business activities. Furthermore, the UK Government has provided a subsidy of US$50,000 to any National Olympic Committee (NOC) taking part in the London Games who was willing to set up

a pre-Games training camp in the UK. The Government financial incentive to NOC could be considered as a form of subsidy for universities to offset the cost of hosting an NOC's team. It should be noted that although financial gains were not the prime motive for HE institutions engagement with the Games, a Podium survey revealed that 16% of institutions (equivalent to 26 institutions) expect to gain a net financial benefit overall as a result of the Games being held in London, with a further 46% (equivalent to 76 institutions) believing that it is a possibility (Podium, 2012–Olympic and Paralympic Games: The Impact of Universities, p. 15).

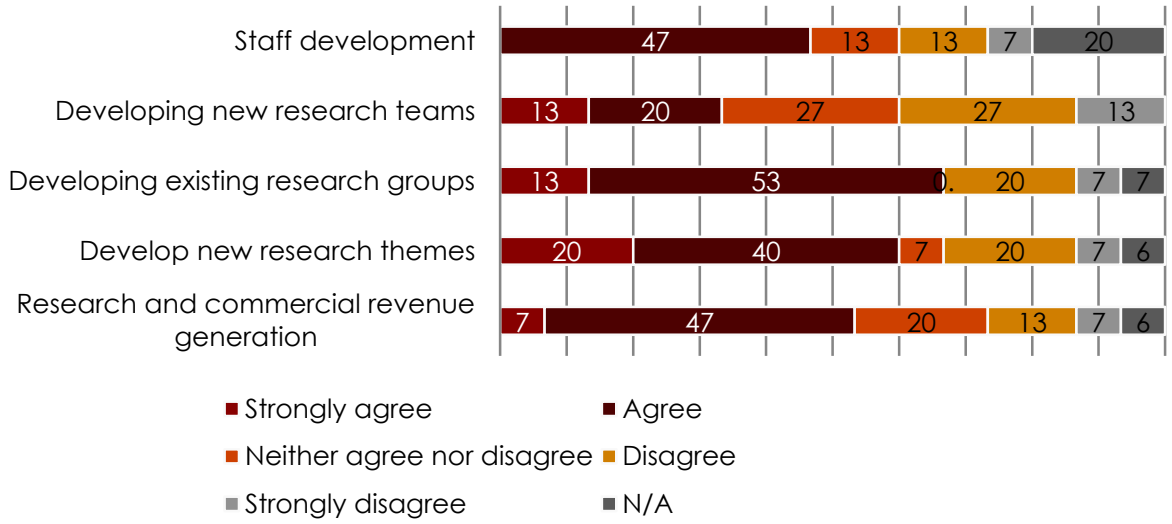
9. Higher Education institutions' general perceptions of the Games

The majority of HE institutions (66%) agreed that the London Olympic and Paralympic Games have presented unique opportunities for developing their research capacity. As demonstrated in previous sections these opportunities, however, also spanned across other activities such as volunteering, culture and the environment. Most of the sector has expressed that they have used the enhanced business activity created by London 2012 to develop the teaching and research capacity of the university before (73%), during (60%) and after (67%) the Games. Institutional engagement, however, was variously achieved: for 54% of the universities it was done through deliberate strategies, for 25% through *ad hoc* programmes and for 38% via a combination of strategy and *ad hoc* programmes. It should be noted that the concept of Olympic strategy, as interpreted by most institutions, covers a wider range of activities not only research or teaching-related ones.

The majority of HE institutions (66%) agreed that the London Olympic and Paralympic Games have presented unique opportunities for developing their research capacity… Institutional engagement, however, was variously achieved: for 54% of the universities it was done through deliberate strategies, for 25% through *ad hoc* programmes and for 38% via a combination of strategy and *ad hoc* programmes.

Figure 5 shows HE institutions' use of the Olympics to enhance their research capacity in selected areas. Concerted efforts were made to develop individual staff (47%) as well as to further support the activities of existing research groups (66%). About one third of the respondents disagreed that their institution had used the Games for any capacity-building purposes.

Figure 5. HE institutions use of the Games for enhancing their research capacity in selected areas (%)



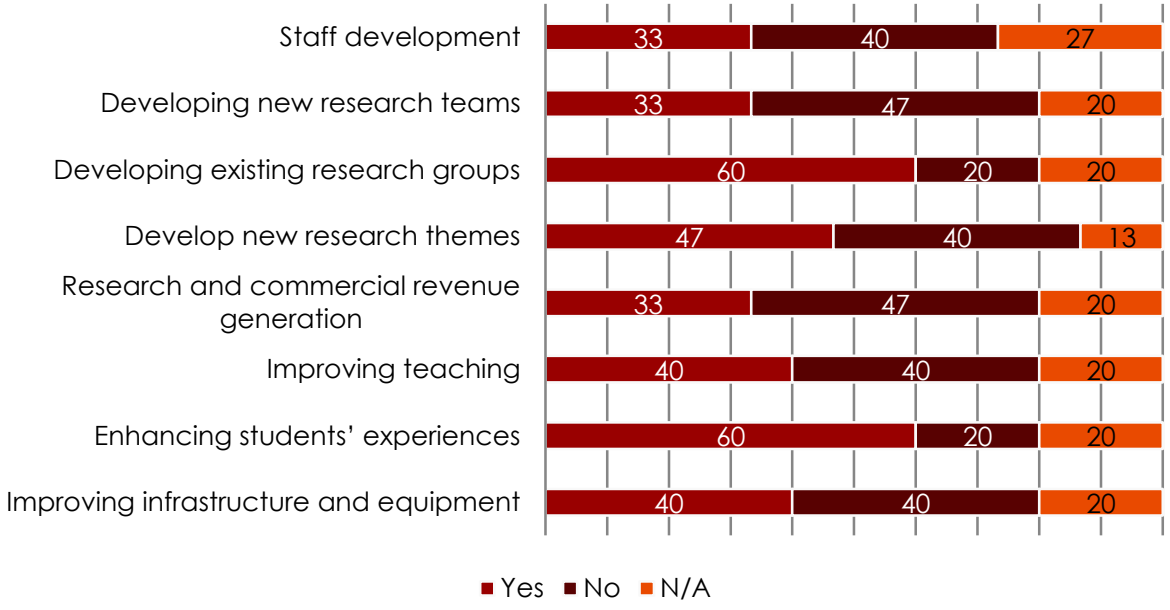
10. Integrating HE institutions' research and teaching strategies with the Games

Virtually no HE institution has developed a coherent long-term strategy for engaging with the Games. There were examples of putting in place engagement programmes (e.g., Universities of Leeds, Brunel), but most of the engagement was done on a tactical and *ad hoc* basis (Figure 6). Clearly, the greatest efforts in this regard were in relation to further extending the work of existing research groups and in enhancing students' experiences in terms of introducing new courses and Olympic-related volunteering opportunities.

Virtually no HE institution has developed a coherent long-term strategy for engaging with the Games. There were examples of putting in place engagement programmes (e.g., Universities of Leeds, Brunel), but most of the engagement was done on a tactical and *ad hoc* basis.

There were, however, some noticeable exceptions, as in the case of Sheffield Hallam University (SHU), which is not a London-based university. They have designed and successfully validated a new undergraduate degree programme in Sport Development and Management including six new modules that was delivered in partnership with LOCOG. As a result, 315 students and 15 staff volunteered for the Games and were largely responsible for running the Games Media Centre. A related tangible outcome of this unique partnership has been the designation of SHU by the IOC as a 'preferred supplier of students' for the Games media operations to future Olympic organisers. This acknowledgement has earned SHU an invitation from the 2014 Sochi Winter Olympics organisers to send 32 students and staffs to work in the Media Centre there during the Games and negotiations are ongoing for offering expertise to the 2016 Rio Games.

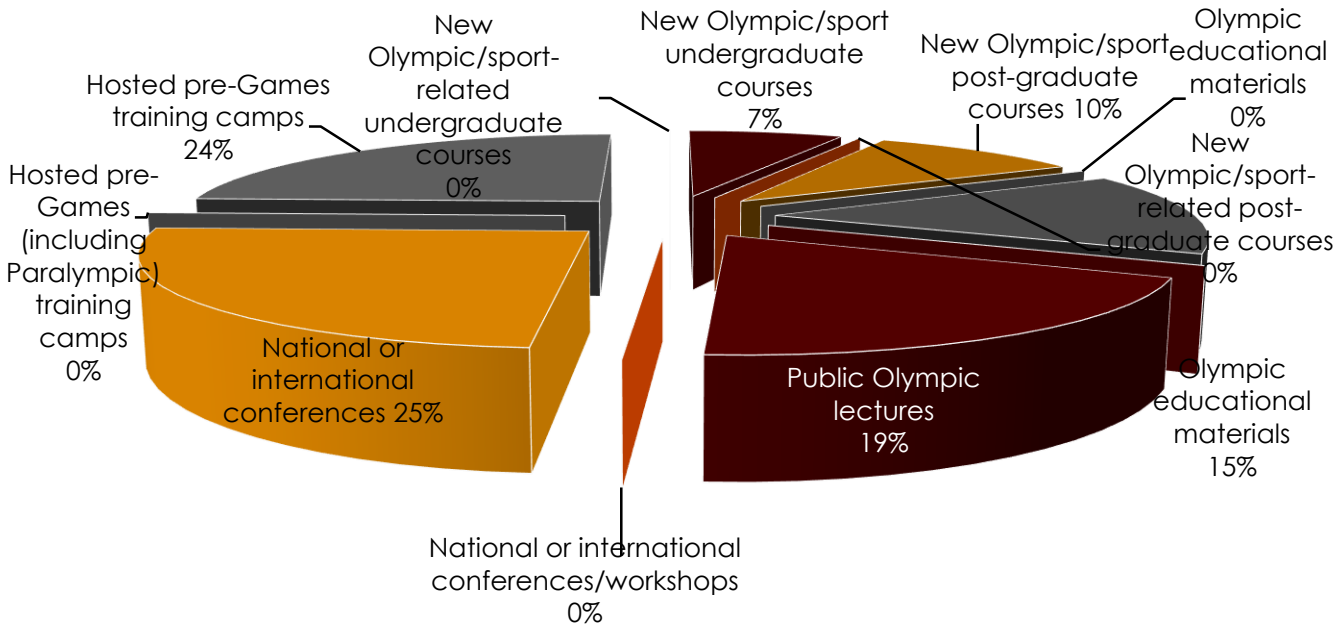
Figure 6. HE insitutions development of specific leveraging strategies in selected areas (%)



In addition to the above strategies, several institutions have developed dedicated programmes to enhance their commercial operations (e.g., marketing and accommodation during the Games), public relations and community engagement.

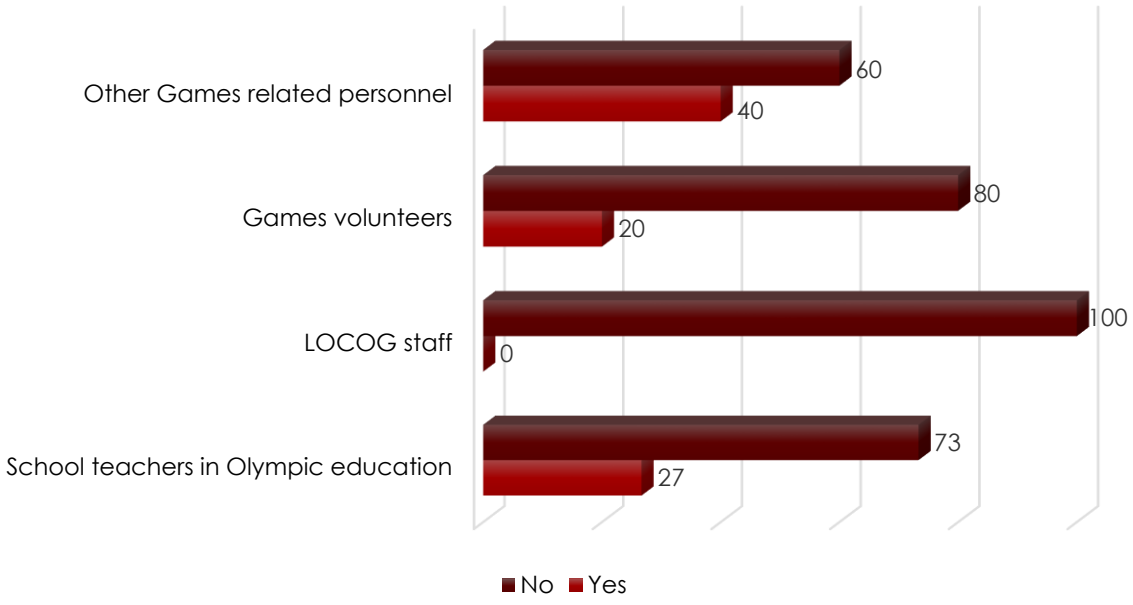
Figure 7 provides a breakdown of the main initiatives organised by HE institutions. As exemplified, 25% of the respondents have organised an Olympic conference and 24% hosted a pre-Games training camp. Conferences represent an important medium for knowledge sharing and dissemination, but most of these have been small-scale event for a selected number of interested participants.

Figure 7. Organisation of Olympic-related activities by HE institutions



Increasingly, UK universities have been expected to demonstrate the impact of their research and teaching activities on practice. Staging of the Olympics is a massive undertaking that requires people with highly specialised skills in a range of areas, which may not be readily available. The demand for specific knowledge and experience has provided universities with an opportunity to train Games personnel. Figure 8 shows universities' involvement in providing training services and it is clear that they had virtually no input in preparing the personnel of the Organising Committee, but did play a role in training school teachers on Olympic matters and Games volunteers.

Figure 8.HE institutions involvement with training Games personnel (%)



Overall, HE institutions did not feel the Games have had significant impact on their research and teaching activities with the sector average of 4.1 and the highest impact being 5 or less on the 10-point scale

Overall, HE institutions did not feel the Games have had significant impact on their research and teaching activities with the sector average of 4.1 and the highest impact being 5 or less on the 10-point scale Overall, HE institutions did not feel the Games have had significant impact on their research and teaching activities with the sector average of 4.1 and the highest impact being 5 or less on the 10-point scale (Table 4). The average impact on institutions' specific research development areas was 3.4. It should be noted, however, that there has been some positive impact on recruiting new PhD students (4.0) and on increasing the research output of some institutions which is a major criterion for the quality of their work.

Table 4. Impact of the London Olympics on HE institutions (0 - no - 10- maximum impact)

HE institutions strategic area	Average impact	HE institutions research development area	Average impact
Staff development	4.2	New staff appointment	2.8
Developing new research teams	3.5	Organisational learning	2.9
Developing existing research groups	4.5	Recruiting new PhD students	4.0
Develop new research themes	5.2	Research grant income from Research Councils	2.9
Research and commercial revenue generation	3.1	Research grant income from industry	3.6
Improving teaching	4.6	Increasing the number of research active staff	2.5
Developing new undergraduate and postgraduate courses	3.1	Increasing the number of research outputs	5.1
Enhancing students' experiences	4.7		
Improving infrastructure and equipment	3.7		

11. Higher Education institutions' use of the Games for communications and raising public awareness

UK HE market is highly competitive and universities are well-aware of the importance of their public image for recruiting students and staff. Undoubtedly, the Games presented unparalleled opportunities in this regard and 53% of the

respondents agreed that London 2012 helped them increase the positive media coverage of their Olympic-related activities. Furthermore, 73% expressed that favourable media coverage Olympics increased general public awareness and interest in their educational programmes.

53% of the respondents agreed that London 2012 helped them increase the positive media coverage of their Olympic-related activities.

12. Higher Education institutions' use of the Games for resource generation

As indicated in previous sections, both the UK government's deliberate strategies and Olympic promoters' activities have created a general climate of expectations that the Games, in and of themselves, will bring various social and financial benefits unavailable before. The portrayed social, sporting and economic importance of the Games for the country was such that it was only natural to expect that that adequate funding would be made available for universities to support their research and teaching activities. Figure 9 summarizes the contribution of the Games in this regard. Apparently, students' experiences was one area (60% agreed) were the extra funds generated has been felt more significantly. London 2012 also provided a stimulus for securing resources for developing existing research groups and new themes (40% agreed).

Most of the funding generated through the Research Councils was for small-scale projects and amounts (27%) and 60% of the institutions were not successful in obtaining any income at all (Figure 10). However, a much higher percentage of institutions (53%) were able to attract research funding from industry partners with 26% of this being considered as significant and moderate income.

Most of the funding generated through the Research Councils was for small-scale projects and amounts (27%) and 60% of the institutions were not successful in obtaining

any income at all (Figure 10). However, a much higher percentage of institutions (53%) were able to attract research funding from industry partners with 26% of this being considered as significant and moderate income (Figure 11). Interestingly, several respondents highlighted that the income for the new research themes has come from charitable donations by benefactors and not from commercial or Research Council sources.

From an institutional perspective it was important to establish whether the reported enhanced teaching and research capabilities can be attributed to the London Games. Some 13% of the respondents agreed, but 60% disagreed that the Olympics have led to increased investment in new and or improved research facilities and equipment. As Table 5 shows there was some increased funding with regard to PhD students research training presumably due to involvement in projects and in building new partnerships with other HE institutions and industry.

Figure 9. Contribution of the London Olympic and Paralympic Games to stimulating generation of additional resources in selected areas (%)

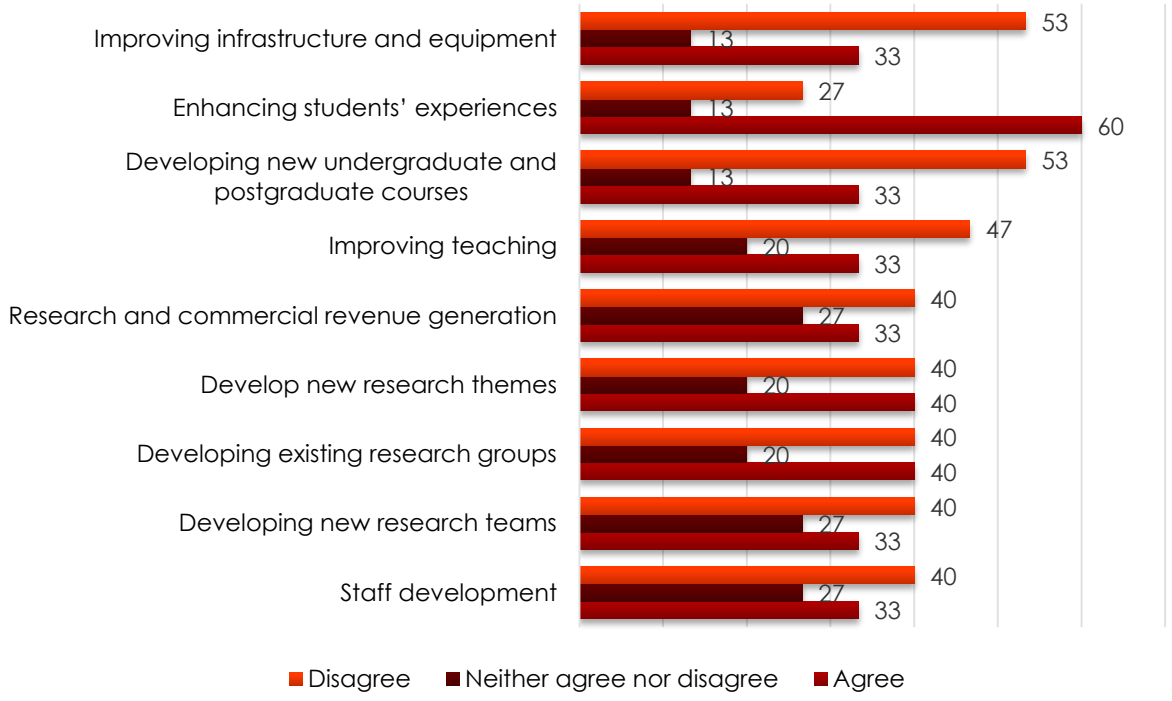


Figure 10. Reseaerch contract income from UK Research Councils (%)

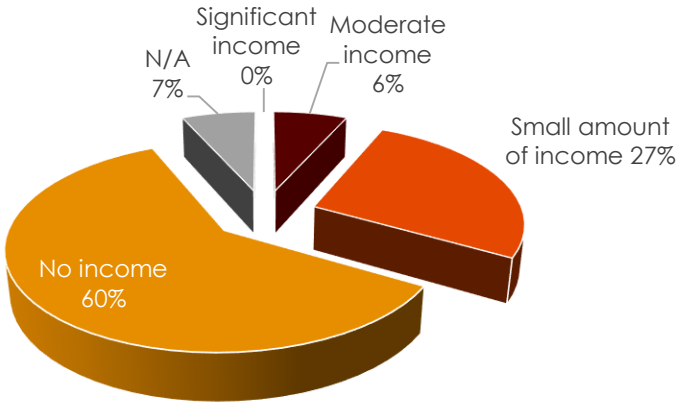


Figure 11. Research contract income from industry

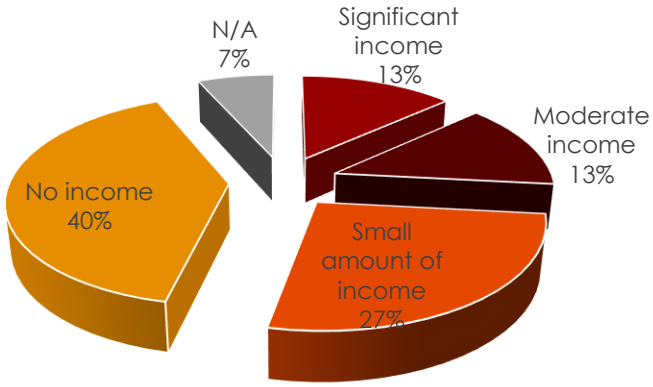


Table 5. Contribution of the London Olympics to HE institutions in securing increased funding to invest in improved research systems and processes in selected areas (%)

Area	**Benefited**	**Neutral**	**Did not benefit**
PhD students research training	40	7	53
Staff research leave scheme	20	20	60
Review incentive structure to encourage research	13	20	67
Change dynamics of existing and build new partnerships	33	20	47
Encourage more attention to QA/standard raising processes	0	27	73

13. Higher Education institutions' use of the Games for improving governance

Quality teaching and research involve interactions between multiple actors and strategic and operational decision-making. Furthermore, the development of new Olympic-related research themes, groups and learning experiences also requires putting in place adequate supporting processes and mechanisms. Therefore, in the context of the HE sector, successful teaching and research are predicated on sound governance systems capable of steering collective actions and delivering results. The study probed into the role of the London Olympic and Paralympic Games in stimulating improvements to HE Institutions' research governance structures and associated decision making processes. The majority of respondents (73%) neither agreed nor disagreed that their institution has managed to introduce any improvements and only 7% agreed that this was the case.

The majority of respondents (73%) neither agreed nor disagreed that their institution has managed to introduce any improvements and only 7% agreed that this was the case.

Owing largely to the high political priority of the London Games afforded by the UK government nearly half of the sample (47%) indicated that the Olympics have stimulated establishing network and greater interfaces between policy makers and researchers, but 33% disagreed. This is an important point as in the current UK political and economic climate the HE sector has experienced significant budget cuts and needs to make convincing arguments for continuing public investments in universities.

47% indicated that the Olympics have stimulated establishing network and greater interfaces between policy makers and researchers, but 33% disagreed.

Improving governance is not a unilateral process where the Games stimulate HE institutions to enhance their systems and processes, but works in the opposite direction as well. All respondents indicated that various numbers of their staff have been

involved with running of the Games by working for LOCOG, Olympic Delivery Authorities or Team GB. For example, 36 university staff worked in general admin/management, 43 as consultants, 25 performed coaching duties, 13 refereed and officiated, 48 were involved in volunteers management, 31 in technical aspects and 52 in other areas such as art-related activities.

14. Higher Education institutions' role in Olympic knowledge generation

Knowledge generation is a fundamental function of universities and the complex nature of the Games as a social, sporting and economic project provided various opportunities for knowledge creation. Figure 12 shows the six main thematic categories in which most of the university research was carried out. The link between the Games and sport participation and athletes' performance were two broad themes that have attracted researchers from over half of the respondent institutions. Undoubtedly, Olympic impacts and legacies has been the most researched and written about topic. A main reason for the popularity of this topic has been the framing of the London Games by the UK Government as a social contract where the significant public investments in the Games would be used to deliver a range of social and economic benefits for the whole country. Thus, economists, environmentalists, sociologists and political scientists have been investigating to what extent the pre-Games plans have been materialised and who the main beneficiaries have been.

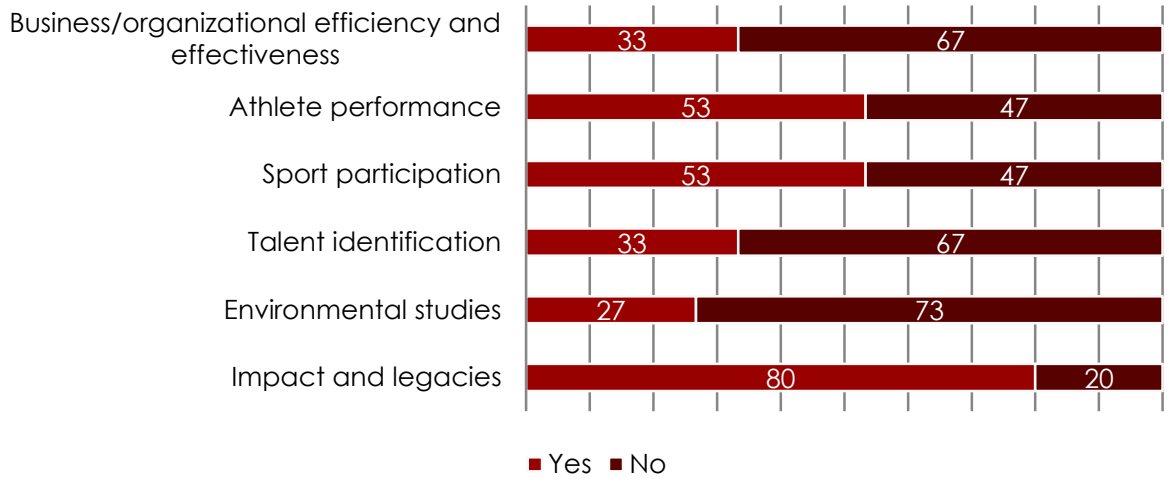
The link between the Games and sport participation and athletes' performance were two broad themes that have attracted researchers from over half of the respondent institutions.

Collins & Girginov's (2015) analysis of Routledge focused Olympic issue project across 40 academic journals revealed that it has made a notable contribution to further constructing Olympic legacy as no longer an abstract concept, but as a legit this topic as a specific ways of thinking and acting in this field. There was a multiplicity of national and regional Olympic engagement programmes and 27% of the sample indicated that they have

been involved in the formal evaluation of the impact of some of these programmes. Interest in this area continues to this day, three years after the Games. However, from an institutional point of view only 7% of the universities have carried out an evaluation of their own Olympic research programme and activities, which suggests that little organisational learning has taken place.

Only 7% of the universities have carried out an evaluation of their own Olympic research programme and activities, which suggests that little organisational learning has taken place.

Figure 12. HE Institutions initiated/collaborated research project by project (%)



15. Higher Education institutions' involvement with Games-related programmes and partnerships

As discussed above a main rationale for hosting the London Olympics was that the Games generate interactions between different actors and organisations that otherwise would have been possible. A main mechanism for public engagement with the Games used by the UK Government and LOCOG has been the implementation of a range of national programmes. Table 6 shows the involvement of HE institutions with seven main Olympic programmes spanning from culture, to sport, volunteering,

business and international development. The greatest involvement regarding the design of various programmes has been with international sport development (47%); in terms participation HE institutions were most active in organising pre-Games training camps (53%), torch relay (53%) and Cultural Olympiad (47%); concerning delivery and evaluation it was the Cultural Olympiad (40%) that attracted most involvement. This suggests that the cultural and other Olympic auxiliary programmes provide much more opportunities for university staff and students' involvement that the actual event itself.

HE institutions were most active in organising pre-Games training camps (53%), torch relay (53%) and Cultural Olympiad (47%); concerning delivery and evaluation it was the Cultural Olympiad (40%) that attracted most involvement.

Table 6. Higher Education institutions involvement with the design, participation and delivery of selected Olympic programmes (%)

Olympic Programme	**Design**		**Participation**		**Delivery & Evaluation**	
	Yes	No	Yes	No	Yes	No
GetSet	7	67	27	53	20	67
Sport Makers	13	60	27	53	13	73
Inspire Mark	20	67	40	40	13	67
Torch Relay	33	53	53	33	20	67
Cultural Olympiad	33	60	47	47	40	40
International sports development projects	47	60	40	53	13	73
Pre-Games training camps	13	47	53	33	13	73
Others	13	47	7	47	0	67

As most Olympic programmes have had a local delivery focus, another level of HE sector's involvement with the Games was with regional and local agencies participating in those programmes. Table 7 shows HE institutions involvement with

various agencies in seven core areas. Similar to table 6 cultural activities (67%) dominated local collaboration, followed by promoting participation in sport (53%) and community development (53%).

Table 7. Direct institutional involvement in working with regional agencies or local authorities on Games related interventions in the selected areas (%)

Area of involvement	**Yes**	**No**
Promotional campaigns to increase participation in sport	53	40
Identifying talent	27	67
Community development	53	40
Environmental initiatives	13	73
Wider cultural activities	67	27
Offering technical solutions	33	53
Tourism development	33	60

Other forms of HE sector's engagement included piloting new projects (40%), developing new research teams (33%), hosting staff development courses (27%) and running innovation workshops (20%). Fifty three percent of HE institutions have also collaborated with other universities to share knowledge and expertise on how to leverage the impact from the London Olympic and Paralympic Games.

16. Higher Education institutions' main beneficiaries from the Games

Survey data and interviews with key academics suggest that while securing full institutional commitment to the London Games in enhancing research and teaching capabilities has not been readily forthcoming, individuals and departments have variously benefited from the Olympics. Only 27% and 20% of the respondents agreed that the London Olympic and Paralympic Games have been an important factor in helping develop the research capacity of the institution, and that they provided a significant stimulus for the injection of increased research/equipment funding into the institution respectively. Similarly, only 27% agreed that staff development in their institution was significantly enhanced by the opportunities provided by the Olympic

and Paralympic Games. However, there seems to be a positive link between universities' involvement with national and local partners on Games research projects and their enhanced capability to influence policy making at these levels (33% agreed).

The main beneficiaries were selected staff members (87%) who were either already working in this area or have developed research and teaching activities as result of the Games. They were followed by selected departments (67%), research centres (60%), and the institution as a whole (53%).

The main beneficiaries were selected staff members (87%) who were either already working in this area or have developed research and teaching activities as result of the Games. They were followed by selected departments (67%), research centres (60%), and the institution as a whole (53%). Apparently, individual and group gains from the Games have not fully translated into main institutional benefits. The following quotes from leading academic staff illustrate the point:

"The games had a direct impact on certain individuals and certain groups. The build-up led to much more interest in our courses and research. Some members of staff immersed themselves with opportunities from the Games, others did little".

"We developed one new research group around disability sport and health, building on our strong link with Paralympics GB. This has brought in over £1m of charitable donations to fund research into improving the health of individuals with disabilities including within the military".

"As the "hard science" research base was already very strong, the main research development opportunity was in the softer areas such as talent identification and development".

17. Conclusion

The study of the UK HE sector leveraging of the London 2012 Olympic & Paralympic Games for capacity building allows drawing several conclusions:

i) Undoubtedly, the Games have provided a stimulus for enhanced research, teaching, cultural and commercial activities across the sector;

ii) Creating a conduit (i.e., Podium) between the HE sector and Games organisers has proved very effective in engaging nearly 100% of universities. However, similar to previous host countries, and despite some innovative initiatives, the UK academic community has failed to bring educationalists together and to produce any breakthroughs in educational policy terms that would significantly alter the standing of Olympic-related research and teaching;

iii) The Government *Research Exercise Framework* policy that governs research in UK universities and the timing of the Games have worked largely against establishing any coherent and long-term research and teaching strategies at institutional level;

iv) Overall, the UK Higher Education sector's leveraging of the Games was more evident on a tactical basis via engaging with specific projects such as hosting pre-Games training camps and putting on new courses;

v) There were six main *leveraging processes* for capacity building utilized by universities including: (1) enhancing students' experiences through the introduction/use of new courses, research and teaching materials and other resources and enabling unique interactions; (2) post-graduate studies development by providing tailored scholarships and opportunities for participation in Olympic research projects; (3) consultancy to various government, charitable and commercial agencies, and Games organizers; (4) image building through showcasing Olympic-related research, teaching and students' sporting achievements and community work; (5) resource generation through research activities and service provision; and (6) forging partnerships with public, non-for-profit and commercial agencies;

vi) The main *leveraging mechanisms* for capacity building employed by HE institutions included submitting research grant applications that allow building intra-and inter-organisational capabilities and synergies, launching new course offers, organising public series lectures for community engagement, students and staff volunteering for the Games and beyond, organising conferences and workshops for knowledge dissemination and sharing, and tapping into national and local Olympic programmes for students and staff engagement;

vii) The Olympics have had a modest overall average impact of 4 and 3.4 points (on a 10-point scale) on HE institutions' main strategic areas and research development areas respectively;

viii) 32 Olympic research projects were funded by the main UK Research Councils between 2003 and 2014 that generated a combined income of nearly £8 million or on average of £250,000 per project, which by UK standards represents a significant amount of money for research in social sciences and humanities;

ix) The core HE institutions' capacities that have been most positively affected by the leveraging of the Olympics were the capacity to achieve developmental results and to relate. As a result a number of staff and organisational units have been able to engage with partners and projects leading to greater individual and collective empowerment;

x) The main capacity building approaches used by HE institutions include capacity grants (e.g., research grants and institutional scholarships), working with development partner (e.g., SHU-LOCOG or with local/regional partner) and structured programmes (e.g., Games volunteering, Cultural Olympiad);

xi) The main beneficiaries of various capacity building activities were individual staff members, research centres and departments. It is not clear how those gains at individual and unit levels will translate into institution-wide enhanced capabilities given the apparent lack of sustained institutional interest in Olympic matters three years after the London Games, and the high mobility of academics.

Table 8 summarizes the link between the core organisational capabilities of HE institutions, the specific capacity area and the effects of leveraging the Games on building core capacities.

Table 8. Effects of leveraging the Games on HE institutions

Core Organisational Capabilities	**Capacity area**	**Effects of leveraging the Games**
To act	Organisational skills development	Improving team work, information sharing, strategic planning, budgeting and forecasting at research centre/department level
	Human resources development	Enhancing staff and students research and teaching and volunteering skills; recruiting new graduate students and staff
To adapt and self-renew	Organisational structure development	Managing change by strengthening existing research groups and supporting the development of new; enhancing institutional image and input of university service units
	Knowledge creation	Developing new themes, academic outputs and teaching materials and information resources; helping organisations and athletes improve their performances
To achieve coherence	Governance	Improving governance procedures and mechanisms at unit level, enhancing the ability for advocacy, accountability and relations with stakeholders; furthering specialization in existing areas of expertise
To generate development results	Aspirations creation Systems and infrastructure building	Creating new research projects and undergraduate courses; engaging with Games specific programmes (e.g., Games volunteers, Cultural Olympiad); Forging links with the HE sector (e.g., hosting conferences and workshops); Forging links with regional and local Olympic partners (e.g., Cultural programme); Forging links with charitable and commercial organisations (e.g., consultancy, delivery of services, involvement in pre-Games training camps); Enhancing effective performance and service delivery of selected units
To relate	Organisational structure dev. Competitiveness	Raising research centres/departments competitiveness institutionally and nationally /internationally; promoting achievement culture; enhancing resources and areas of expertise.

18. Lessons for Tokyo 2020

The political, economic and social environment of the UK is very different from that of Japan. Considering also that knowledge in this report was produced in the specific context of the 2012 London Olympics urges caution when transferring it across cultures and organisations. However, both the UK and Japan share some important common characteristics in two respects: first, the Higher Education sector is driven by the desire to create new knowledge, to demonstrate its relevance to the real world and to prepare the next generations of scientists, managers, educators and leaders, for which it needs to have certain capacities; second, there is a considerable degree of standardization in the delivery of the Olympic Games regardless of context. These two similarities facilitate the transferability of knowledge and skills across the two countries.

Policy-related issues

The link between the UK HE sector and the London Olympics needs to be seen in the context of the sector's wider social and economic role. A conscious policy decision was made in 2006 that the sector will not opt for any grand and costly new projects rather it will focus its efforts on using the opportunities presented by the Games to deliver its strategic objectives. Podium was created with the specific remit to be the link between the HE sector and the Games, thus ensuring a degree of independence of its strategic direction and operations.

Three key factors were responsible for the success of Podium as an organisation:

- ✓ establishing a clear and realistic vision and remit that would enable Podium to deliver its mission;

- ✓ establishing a simple business model of governance and financing to support the delivery of its mission; and
- ✓ developing a cost-effective communication strategy and a comprehensive network of HE and FE member institutions through which Podium was able to carry out its work.

Podium did not deliver any services as it did not have the organisational capacity to do so. However, it managed to successfully position itself as a credible agency that was supported by HEFCE and LOCOG. This ensured Podium the legitimacy needed to be able to effectively communicate with the HE sector, which has always been challenging for a new organisation that appears in a historically well-established market with highly reputable institutions.

The political regulation of research in the UK was not conducive for using the Olympics as a main driver for developing new research and teaching strategies. Thus, an analysis of the existing policy regulation of research and its alignment with any Olympic research strategies is an essential precondition for long-term success.

Research-related issues

The Olympic Games are a complex cultural, political, economic and sporting phenomenon which requires developing multidisciplinary and long-term projects capable of producing theory and practice-relevant insights and solutions.

- ✓ Demonstrating the impact of research is critical for gaining institutional and financial support from public, voluntary and commercial sectors;
- ✓ Consider recruiting (on permanent or project-basis) research active staff around existing research centres/groups for establishing critical mass needed to carry out large-scale projects;
- ✓ Identifying in advance how research projects can be sustained after they have been completed through various teaching/training and community engagement activities such as volunteering;

- ✓ Building international collaborations and seeking project funding beyond Japan;
- ✓ The cyclical nature of mega sporting (and other) events facilitates greatly knowledge and skills transfer across various sectors and necessitates developing organisational policies to capture and codify knowledge.

Teaching-related issues

- ✓ Establish national/local guidelines for promoting Olympic studies and develop 2-3 large scale projects designed to create open access data bases and teaching resources for undergraduate and post graduate students;
- ✓ Aligning teaching strategies with national and local Olympic programmes to ground the curricula in real world Olympic examples and to enhance students' experiences;
- ✓ Make efforts to integrate teaching with research and wider community engagement to multiply the effects for students, staff and institutions;
- ✓ Codify staff and students' knowledge in various reusable forms;
- ✓ Build capacity by putting in place staff development courses, workshops and master classes to ensure the quality of teaching;

Organisational issues

- ✓ Ensure organisational commitment to Olympic-related research and teaching initiatives as early as possible;
- ✓ Establish a university-wide steering group to coordinate various activities and resources;
- ✓ Identify capacity building needs and align research and teaching plans with key strategic objectives;
- ✓ Ensure university-wide 'buy-in' into research and teaching efforts and educate departments/staff whose work has not been related to the Olympics and sport in general;
- ✓ Successful implementation of Olympic-related initiatives raises the institutional profile and serves as a powerful recruitment tool.

Impact-related issues

- ✓ Demonstrating the impact of research and teaching is critical for gaining and sustaining institutional and government support. Therefore, regular monitoring and evaluation of research and teaching activities provides reliable information allowing to better advocate a particular cause and to correct plans;
- ✓ Delineate different kinds and levels of impacts (i.e., social, economic, sporting, cultural; organisational, local, national) and clearly articulate them before the launch of any programme and analyse them after the programme has been completed.

Sustainability – ensuring long term planning in uncertain environments

- ✓ Olympic enthusiasm has proved short-lived and there has been a tendency for most Games' initiatives to fade away after the Olympics have ended. It is therefore, critical to integrate the core Olympic research and teaching activities with organisational long-term strategies to ensure their sustainability;
- ✓ Prior identification of sustainable research and teaching programmes will allow for better integrating them with particular organisational and community priorities.

References

Beesley, L. & Chalip, L. (2011). Seeking (and not seeking) to leverage mega-sport events in non-host destinations: The case of Shanghai and the Beijing Olympics, *Journal of Sport & Tourism,* 16 (4), 323-344.

Blumenthal, B. (2003) *Investing in Capacity Building: A Guide to High Impact Approaches* London: Foundation Center.

Cashman, R., & Toohey, K. (2002). *THE CONTRIBUTION OF THE HIGHER EDUCATION SECTOR TO THE SYDNEY 2000 OLYMPIC GAMES*. Centre for Olympic Studies, The University of New South Wales, Sydney.

Chalip, L. (2004). Beyond impact: A General model for host community event leverage. In B.W. Ritchie & D.Adair (Eds.), *Sport tourism: Interrelationships, impacts and issues*. Clevedon, UK: Channel View.

Chatziefstathiou, D. (2012). Further and Higher Education involvement with the Olympic and Paralympic Games. In V. Girginov (Ed.). *Handbook of the London 2012 Olympic & Paralympic Games*. *Vol.1 – Making the Games.* Routledge: London.

Christensen,R.. & Gazley, B. (2008). Capacity for Public Administration: Analysis of Meaning and Measurement, *Public Administration and Development*, 28, 265–279.

Collins, M, & Girginov, V. (2015). Rehashing and new knowledge about the Games: a bibliometric analysis and assessment of Routledge's special Olympic journal issues (pp.82-98), In G. Poynter, V. Viehoff & Y. Li (Eds.). *The London Olympics and Urban Development. London*: Routledge.

Cornforth, C. & Mordaunt, J. (2011). Organisational Capacity Building: Understanding the Dilemmas for Foundations of Intervening in Small- and Medium-Size Charities. *Voluntas*: *International Journal of Voluntary Nonprofit Organizations*, 22(3) pp. 428–449.

Getz, D., (2009). Policy for sustainable and responsible festivals and events: institutionalization of a new paradigm. *Journal of Policy Research in Tourism, Leisure and Events*, 1(1), 61-78.

Graver, A., et al. (2010). *What Lasting Educational Benefits can be Created by Mega Events?* Newcastle: CfBT Education Trust

Grix, J. (Ed). (2014). *Leveraging Legacies from Sport Mega-Events*. London: Palgrave.

Hondale, B. (1981). A Capacity-Building Framework: A Search for Concept and Purpose, *Public Administration Review*, 41 (5), 575-580.

Fowler, Z., Baird, A., Baron, S., Davies, S., Procter, R., & Salisbury, J. (2009). Building research

capacity in Education: evidence from recent initiatives in England, Scotland and Wales, *International Journal for Researcher Development*, 1 (2), 173 – 189.

Jago, L. et al. (2010). Optimising the potential of mega-events: an overview', International *Journal of Event and Festival Management*, 1 (3), pp.220 – 237.

HEFCE (2013). *Higher Education – Business and Community Interaction Survey 2011-12*. London: HEFCE. HEFCE (2008). *HEFCE strategic plan 2006-11* (Updated May 2008). London: HEFCE.

Henry, I., et al. (2008). *THE CONTRIBUTION OF THE FURTHER AND HIGHER EDUCATION SECTORS TO THE STAGING AND DELIVERY OF THE 2008 BEIJING OLYMPIC GAMES*. London: Podium.

Hooley, T., Kent, R., & Williams, S. (2010). Introduction: Hard Times? Building and Sustaining Research Capacity in UK Universities, *Occasional Paper* No 5 August 2010.

Karadakis, K., Kaplanidou, K., & Karlis, G. (2010). Event leveraging of mega sport events: a SWOT analysis approach. *International Journal of Event and Festival Management*, 1(3), 170-185.

Kelly, U., McNicoll, I., & White, J. (2014). *The Economic Impact of Higher Education Institutions in England*. London: Universities UK.

Smith, A. (2010). Leveraging benefits from major events: maximising opportunities for peripheral urban areas. *Managing Leisure*. 15, 161–180.

Sowa, J., Selden, S., & Sandfort, J. (2004). No Longer Immeasurable? A Multidimensional Integrated Model of Nonprofit Organizational Effectiveness. *Nonprofit and Voluntary Sector Quarterly*, 33 (4), 711-728.

Weed, M., et al. (2011). *The Engagement of Further and Higher Education with the London 2012 Olympic and Paralympic Games*. Canterbury: SPEAR.

Weed, M., et al. (2012). *The Engagement of Further and Higher Education with the London 2012 Olympic and Paralympic Games Realising Ambitions and Achieving Long-Term Benefits*. Canterbury: SPEAR.

Wigboldus, S., Nell, A-J., Brouwer, H., and Lee, vdL. (2010). *Making Sense of Capacity Development*. Wageiningen: Wageiningen UR Centre for Development Innovation.

Zinke, J. (2006). European Centre for Development Policy Management Study on Capacity, Change and Performance -Final Workshop. *Workshop report*. Maastricht, 15-17 May 2006.