

Towards a State of the Nation for Built Environment Education in the UK

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Built environment higher education provision in the UK has not previously had at its disposal a summary of key metrics relating specifically to the subject area. A need to provide a robust and longitudinal picture of the higher education landscape was identified by the Council of Heads of the built environment (CHOBE). In their role as managers of significant business operations these heads of higher education departments identified the need for a resource that provides current information but that would also illustrate trends and developments via an annual publication. This study covers the development of the methodology that forms the basis of the State of the Nation Report for the built environment discipline in the UK. The study will address how content has been developed utilising a Delphi based methodology. This has ensured that the scope and structure of the report have been developed and owned by those who have an interest in the work. The work utilises a Delphi based approach to determine the scope and structure of the research. The lessons learnt from the development of the report and its methodological underpinnings offer a vision for the development and execution of the data.

Keywords: Delphi process, Educational structures, longitudinal study, national benchmarking

Introduction - What is the State of the Nation?

“A key to improving the quality of built environment education is making its scope and value broadly available and comparable.” (Graves, 1990) Academics across the built environment discipline have recognised the need to obtain a picture of the educational landscape that is both specific to the subject area whilst being a resource upon which to make comparisons.

The State of the Nation of Built Environment Education Report (hereafter referred to as State of the Nation report) is being undertaken to provide a robust and longitudinal picture of the higher education landscape in the United Kingdom. It will identify current academic provision and the modes of study that deliver it. The report is being realised through two organisations. Firstly the The Council of Head of the Built Environment (CHOBE) a group formed to bring together Heads from across predominantly building, construction, real estate and surveying discipline areas. COBE will work alongside The Centre for Education in the Built Environment (CEBE) which is one of 22 UK government funded subject centres with the remit of supporting the student experience, specifically in learning and teaching areas. By working collaboratively, the two organizations have identified mutual benefit. CEBE are a nationally focused impartial organization, able to collect data without institutional influence and have the capacity to produce robust research that will provide meaningful data and analysis for the subject community it serves. CHOBE’s members benefit institutionally in accessing comparative data, which will allow for market analysis and business planning. CHOBE members providing information is crucial to develop a report that contains accurate and updated information. Thus both organizations bring value to their involvement in producing the State of the Nation report.

In order to comprehensively address the production of the report the specific phases of development, execution and evaluation have been used. At the time of writing this paper activities have advanced through the development phase and are now engaged in the initial implementation. As a result, the emphasis of this study will be placed upon the development of the State of the Nation report.

Why undertake the State of the Nation?

The fundamental rationale for the production of the State of the Nation report is to provide a longitudinal picture of built environment provision by higher education within the United Kingdom. By collecting data from the same subjects at an agreed point each year there is a reference point to elucidate both an overview of current but also, over time, appreciate changes, establish trends and undertake some comparative analysis. There is the opportunity to link changes in trends to specific events or conditions or to develop further hypotheses to support changes. Presenting the data longitudinally will provide a robust and transparent substantiation of evidence that up until this point in time has only been viewed as anecdotal knowledge. A definitive document summarises the current levels of provision and scope of built environment provision in the UK has never existed. Other studies of elements of built environment education have been undertaken but these are generally ‘snap shots’ in time (Ellis and Wood 2005). It was felt a specific report for the subject community would be of benefit to their internal resource planning and to position built environment provision as a whole most effectively to respond to the current economic, political and environmental agendas.

“We must establish what is missing from our current provision in the first instance, but what is of greatest value to me in this activity is the capacity to horizon scan for the next “big thing” as a subject area. If my School is able to tap into this and plan resources accordingly then the value of the State of the Nation is immeasurable”. (CHOBE Delphi Group Member, 2009)

The activity shaping the State of the Nation Report will allow built environment decision makers to place data from their own schools in the context of an ever-changing landscape. It provides a tool by which to judge the future direction and impact of educational policy. Establishing a longitudinal picture would allow stakeholders to determine subjects of increasing or diminishing popularity or relevance.

It is not unusual within the United Kingdom for targets to be set for industry and to have their performance tracked against these targets over a number of years (Construction Skills, 2008) but it is a more recent activity within higher education provision. There are widely recognised “league tables” that assess higher education institutions (HEI’s) by various criteria including academic, pastoral and ICT resources. However the State of the Nation does not seek to replicate the work of the UK University league tables. It will focus on the built environment as a specific subject field and provide an evidence base from which those with an interest in its provision in higher education can to assess its overall health. It allows the subject community to benchmark its agility and organisational capacity to respond to policy imperatives and economic drivers against other fields of study. The completed report will blend hard quantitative with the structured collection of quantitative information from the community of practice. This will move the analysis beyond the anecdotal and bring areas such as staff student ratios, recruitment onto courses and retention of students. .

Audience

The audience for the State of the Nation report will primarily consist of academics allied to the built environment subject area. However this audience is not expected to consist exclusively of this group. The higher education curriculum within many schools of the built environments across the UK demonstrates a rich mixture of industrial and professional input. It is anticipated that the findings presented in the state of the nation report will be valued highly by the academic audience of the sector but there will be information of interest to a much wider audience.

Use

The State Of The Nation report seeks to become a definitive reference tool for those managing Departments/Schools/Faculties in UK Higher Education Institutions (HEI’s.) It will give specific data to enable those making strategic decisions regarding staffing, curriculum provision and business models the capacity to inform strategic thinking. The report seeks to develop its reputation within the sector as an authoritative document that is a resource for those seeking to develop portfolios of activity within their institution and make the appropriate business case for expanding areas of the curriculum. To ensure the fundamental information that underpins provision is covered a “core” section of data will be presented annually. Presented concisely and transparently, this core of information will be vital in developing the State of the Nation report as a trusted information resource. Alongside the core elements that will give annual and over time a longitudinal picture of the sector there will be special interest project areas. These sections will reflect new developments broad enough to warrant their own study for example the National Student Survey, which began in 2005 in the UK.

Special interest project areas may eventually feed into the core sections or may simply serve to reflect the importance of an issue or factor to that annual cycle.

The Centre for Education in the Built Environment

This research is being developed and implemented by the Centre for Education in the Built Environment (CEBE). CEBE is one of 24 Higher Education Academy (HEA) Subject Centres. The HEA was established by the UK Government to develop the quality of the student experience with UK Higher Education Institutions (HEIs). The HEA has a series of Subject Centres, located within host HEIs, which address subject specific activity for the HEA. CEBE is a split site Subject Centre with Planning, Transport and Architecture based at the University of Cardiff (Wales) and Surveying, Real Estate and Construction based at the University of Salford (England). As part of its function CEBE is tasked with responding to the needs of those who manage, deliver and create built environment education within the United Kingdom.

The Council of the Heads of the Built Environment

With the United Kingdom there are several representative groups whose footprints touch on or are included within the built environment. This includes the Standing Council of Heads of Architecture (SCHOSA), the Council of Heads of Planning (CHOPs) and the Council of Heads of the Built Environment (CHOBE). These groups are similar in structure and mission but vary in maturity. CHOBE's membership is taken from Heads of School/Department who meet to discuss current challenges, opportunities and directions within built environment education. They are led by an executive group which meet quarterly and arrange training, workshops and activities that respond to the wider CHOBE membership's needs. CHOBE have historically called for a clearer exposition of data relating to course provision, student profile and staffing across the built environment. This has been met with widespread acceptance from CHOBE members. Pressures of time and increasingly limited resources within Higher Education for such activities to be performed by academics were leading CHOBE to conclude the activity would not be feasible to operationalize. CEBE, with its existing linkages to CHOBE was able to offer the resource to undertake provision of a State of the Nation report allowing the two representative bodies for UK built environment education to work collaboratively and thus fulfil mutually beneficial objectives. CEBE will synthesise existing information, collect appropriate qualitative and quantitative data and present this to form an annual report. This will be available in hard copy and electronic formats.

Methodology

The State of the Nation is one project broken into two methodological elements. Both stages are described here so that the reader can appreciate the work which will be carried forward after the development stage. The first process, which is reported in this paper, pertains to the how the subject areas covered in the report were chosen, by whom and how they would be presented. Having discerned areas of interest the second methodological stage is the gathering, evaluating and reporting on the data. The first stage will be referred to as the development stage whilst the second stage will be referred to as the implementation stage. The two stages are fundamentally different in their objectives. The objective of the development phase is to create an understanding of the key areas which need to be explored to inform built environment education. The implementation phase investigates the key areas identified in the development phase. The different methodologies deployed in each stage are described below. As the intention is for this research to be longitudinal, the evaluation and development of the activity is built into the implementation phase.

The implementation of the State of the Nation project is staggered. The main section of the report will address the longitudinal elements of the research. This section of the report has been designated the 'core' section. In the core section the same, or very similar, questions will be asked year-on-year to allow a trend analysis to be performed on the key areas identified in the development phase of the project. In order to address areas of interest which may not warrant inclusion in the core section of the project there will be 'special' topics created for a limited number of years to address short term issues. Because the unique characteristic of this work is the longitudinal nature of the core section the development of the special topics will be delayed until the second cycle of work.

Development Phase

The goal of the State of the Nation project is to respond to the needs of built environment decision makers to give them the information that they require in their day-to-day jobs as well as an analysis of how built environment education within the United Kingdom is changing over time. In this sense it was important to develop the structure, content and nature of the State of the Nation project with the group of individuals who would be interested in the findings of the research. To this end, the development phase adopted a Delphi like methodology (Mullin, 2003) whereby a group of experts is identified and brought together to discuss or develop an answer to a particular challenge or topic. The CHOBÉ executive membership consists of a broad coverage from demographic, gender and discipline groups and so was identified as an excellent grouping to formulate the Delphi group of expertise. The CHOBÉ executive group is a self selected group of CHOBÉ members who have the support of the wider membership. Geographically the Executive covers England and Scotland but Wales and Northern Ireland are not represented. However, as the membership of CHOBÉ is drawn from all the countries within the United Kingdom it is reasonable to believe they are in a position to act as the Delphi expert group.

Through a series of workshops, experts were asked to identify the areas they felt were important enough to form the ‘core’ of the State of the Nation project. In capturing the discussion a foundation of important topic areas to the subject community was established. Subjects were developed along with performance indicators to ensure there was a robust and transparent data collection strategy for the project. The subject areas were presented back to the Delphi group who were able to offer further comments on this iteration suggesting amendments appropriate to the scope of the study. This process was repeated until no objections were made against the proposals put forward.

The most significant benefit of working with a Delphi approach is the ‘buy in’ of respondents to the research. As the experts have direct input into the identification of the subject areas for included in the report’s core section then they are more likely to respond to requests for information. This sense of collective ownership and responsibility is vital to the success of the report as the development of its credibility will come from breadth and depth of responses from the subject community it seeks to inform. A supplementary benefit to the State of the Nation adopting a Delphi approach is the difficulty to those project managing and conducting the research to influence chosen areas, responses to questioning or the outcomes of the research.

The role of CHOBÉ within the State of the Nation project methodology is multi-layered. The CHOBÉ executive group are the Delphi panel. Their setting of direction for the project is the focus of this paper. CHOBÉ’s wider membership will return data and qualitative information during the implementation phase. Finally, CHOBÉ and its membership will ultimately act as consumers. They will evaluate personally and through feedback from their individual schools and faculties the value and impact of the State of the Nation annual report and enable through a virtuous learning cycle development to occur to improve relevance and coverage. CHOBÉ’s position in this work is represented in Figure 1 which shows CHOBÉ at the centre of the longitudinal element of the study.

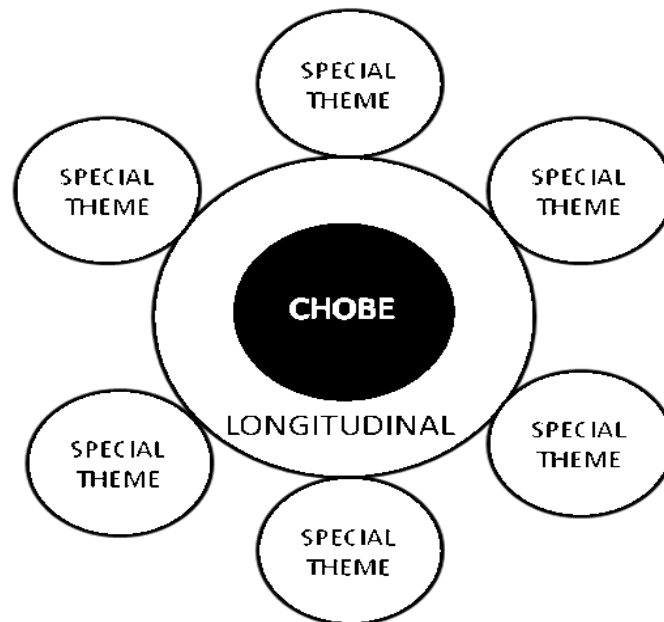


Fig 1 Structure of the State of the Nation Report

Implementation Phase

This paper focuses on the development phase of the State of the Nation project but it is worth briefly describing the nature of the work that will take place over the next twelve months in the implantation phase. This phase of work will involve a multi-technique approach to gathering data. We intend to employ three types of data capture methods.

Collection and compilation of existing material

Within the United Kingdom there are a number of publically available sources which can provide broad levels of data on areas such as which courses are available and the numbers of students studying. Two major sources of information are the Universities and Colleges Admissions Service (UCAS) and the Higher Education Statistics Association (HESA). UCAS are the organisation responsible for managing applications to higher education undergraduate courses in the United Kingdom. They process over two million applications a year and hold information on all undergraduate courses. HESA is the official agency for the collection, analysis and dissemination of quantitative information about higher education. This includes student information on areas that include numbers, domicile, gender, age groups, level of study etc.

To supplement qualitative data further information will be gathered from CHOE representatives that are more qualitative. In following the Delphi process to identify the key areas to address the CEBE researchers undertaking the study will develop a blended analysis of both data sets to analyse the results. Through a series of semi-structured interviews with Heads of Schools/Departments we will seek to capture the view of the sector in the broad categories: where have we been? Where are we now? And where are we going? The semi-structured interviews will address the topic areas identified in the development phase and once a complete cycle of the project has been completed the data captured will be used as the context for the categories.

Using the information gathered in the data compilation and qualitative sections of the work a questionnaire will be developed which will be distributed to all heads of built environment schools or departments.

Results

The results presented here were generated in three separate meetings of the Delphi group over a period of ten weeks. The following results section is presented using each meeting to structure the development of the content for the State of the Nation report.

London Meeting – July 2009

The first meeting, held in London, took the form of an open discussion based on the concept of the State of the Nation project and what and how it could be of use. This meeting lasted approximately two hours and was crucial in developing a shared understanding of what the State of the Nation report was trying to achieve. The discussion was captured and used to inform the development of the format of the second meeting described below.

It is worthwhile noting that the CHOBÉ executive is a pre-formed group which has adopted the mantle of the State of the Nation Delphi group. As a pre-existing group the dynamics between the members had already formed. No attempt was made in the first meeting to control or neutralise this. It was important that as a group they were able to develop an understanding of the project.

Salford Meeting – August 2009

This meeting took place at the University of Salford in the format of a half day workshop. The eight members of the CHOBÉ executive were split into two groups of four. This was in order to prevent the existing group dynamics from affecting the outputs from the meeting. Having two groups provided a ‘check and balance’ so that we could compare and contrast with the groups the answers they had formulated in their discussions. It was important at this stage that areas identified by each of the groups were similar or the same as if they had been radically different then this may have indicated that the Delphi group would have been unable to agree on content for the project.

Each of the groups was allocated a facilitator whose role it was to capture the discussion and to ensure that it remained focused on the question in hand. The groups were set the following activity:-

List the topic areas you feel would add most value to the core of the State of the Nation report.

They were given an example of ‘students within the HE system’ as a potential topic area. They were asked not to develop too much detail in their responses as they would be given opportunity to address this later in the session. The facilitators ensured that the discussion remained at a broad level and captured the topic areas. It should be noted that each of the CHOBÉ executive group is a practicing Head of School/Department or designate so it there was a challenge in keeping the conversation at a broad level and preventing the conversation focusing on specific elements of data or questions that the group would like to see asked. Table 1 lists the broad areas identified by the two groups.

Table 1

Broad subject areas identified by each group – Salford workshop (September 2009)

Group A	Group B
Definition, scope and positioning of the BE.	Scope of Schools (structure size)
Staff (level, composition and support)	Stakeholders
Organisational structures	Business planning
Internationalisation	Recruitment
Research	Output
Enterprise and marketing/ external engagement	Staffing
Marketing info (HESA like more direct/applicable)	
Student experience	
Student composition/demographic (performance)	
Employability	
Professional Bodies	

This data was shared with the group and they were asked to pick the three or four topics they thought the most important and to develop the area with a more detail. The groups were allowed to select from each other’s lists and also allowed to incorporate two or more of the areas together into a new area. The purpose of this exercise was twofold. Firstly to create a situation in which the groups had to prioritize the areas in terms of importance and secondly to begin thinking about the detail contained with these broad headings. The areas each of the groups prioritized are presented in Table 2.

Table 2

Subjects identified as priority areas by each group – Salford workshop (September 2009)

Group A	Group B
Scope of Built Environment	Students
Students	Staff
Staff (level, composition and support)	Scope of Built Environment
Portfolio	

As can be seen in Table 2, there was strong agreement between the two groups regarding the areas they viewed to be of greatest significance. Specifically agreement can be seen in the area of the scope of the subject area. In the UK built environment study can encompass engineering, design, planning, real estate and surveying. During the discussion it became clear that one major element of the role of a Head of School is that of business manager. Understandably this creates problems, not just in terms of defining an area of study, but in business planning, recruitment and strategically marketing a School or an institution in an increasingly competitive market.

Agreement was also reached in addressing the needs of the student. With tuition fees introduced to the individual learner in the UK in 2005 the view of students as consumers places an increasingly strong emphasis on enhancing their experience through the educational system as a priority. Whilst addressing students as a body was seen as important equally staffing within the subject area was given a high priority too. The final areas agreed upon by the groups could have been predicted at the start of the process; in fact they were but were not shared with the Delphi group beforehand. The outcomes of the workshop vindicated the ideas that CEBE researchers had internally felt may arise and these were demonstrated to the workshop with several elements of justification. It demonstrated to the CHOBE audience that CEBE had given the State of the Nation due consideration in advance of the workshop but also it represented shared thoughts and priority areas for the work ahead. It was important to follow the process of allowing the group to come to its own conclusion without influence from the researchers

Leamington Spa Meeting – September 2009

In order to finally validate the areas identified by the Delphi group we ran a final meeting at Leamington Spa. This was also a half day workshop which followed a similar structure to the meeting in Salford. However, in addition to the Delphi group this meeting included an additional thirteen Heads of School/Department. This was at the request of the Delphi group who thought it would be valuable to open the discussion to a wider audience.

Three activities were undertaken with four groups each containing five or six members. The first activity was very similar to that in the Salford workshop. In this activity the participants were given handouts with the areas identified in the Salford workshops to act as triggers. They were encouraged to add to these areas and then asked to 'traffic light' the topic areas. The groups were given red, orange and green stickers and asked to stick these onto topic areas in the handouts. Green represented '*must be covered*' in the State of the Nation, orange represented '*interesting but not essential*' and red represented '*best left out*'. Groups were only given 4 green stickers but had as many orange and red as they wanted. Each group returned one completed activity sheet back to the facilitators.

The second activity covered how the data needed in the implementation stage would best be captured and disseminated. The third activity was to generate detailed comments on each of the topic areas identified as important in the traffic lighting process against four headings. The four headings were 'your department', 'your staff', 'your provision' and 'your students'. Qualitative feedback was captured by means of comments on each of the activities but in general this supported the areas identified in the workshop meeting held in Salford.

Established Direction

The development phase of the State of the Nation project has established the following directions in order to inform the second stage of implementation:

- There is room and scope for a State of the Nation project to add value to built environment within the UK.

- The gathering, analysing and review of data should take place around four central themes which are staff, student, department and provision.
- There is a consensus among the Delphi group and wider constituency that these four themes will provide a useful framework to create a longitudinal study.

Summary & Future Steps

The first phase of the State of the Nation project has confirmed the need for a longitudinal study of built environment education within the UK. The work with CHOBE has confirmed that this should take place around the themes of student, staff, department and provision. The activity has raised the profile of the State of the Nation project with the CHOBE members and with a wider group of Heads of Department.

Work is underway to develop detailed research tools to capture the data required for the generation of the State of the Nation report.

The State of the Nation report will be a hard copy publication, produced on an annual basis. Data collection will begin early in 2010 and the first report will be published in September 2010. The report will be available through a dedicated website following date of publication for ease of access throughout the academic cycle. The subsidiary special themes have the opportunity to be published at appropriate points within the academic year but to allow the credibility of the state of the nation report to grow in its initial years of activity an annual report was agreed to be the most effective method of delivery.

Each institution that submits responses to the State of the Nation report will be given their own institutional overview. A confidential return to the specified institutional contact, this will allow that particular institution to benchmark themselves against sector and regional norms.

References

- Construction Skills. (2008). 2020 Vision – The future of UK Construction. [WWW document]. URL http://www.cskills.org/uploads/2020VisionExecSummary_tcm17-10720.pdf (accessed 30th October 2009).
- Ellis R. and Wood G. (March 2006). The future of surveying education. *RICS Findings in the Built Environment* [WWW document]. URL http://www.rics.org/site/scripts/download_info.aspx?fileID=3447&categoryID=450 (accessed 30th October 2009).
- Graves G. (1990) Teaching about the Built Environment [WWW document]. URL <http://www.ericdigests.org/pre-9217/built.htm> (accessed 30th October 2009).
- Mullin, P. (2003). Delphi: myths and reality. *Journal of Health Organisation and Management* ,17 (1), 37-52.