

Managing for the Future in Higher Education

A Case Study on 'Lean' Implementation Within a UK Business School

Harry Barton
Nottingham Business School, Nottingham Trent University, UK
Email: harry.barton@ntu.ac.uk

Abstract

In an increasingly global and competitive market place, Higher Education (HE) institutions across the globe are increasingly becoming more 'managerial' with an emphasis being placed on value for money and the improvement of student (customer) satisfaction. In the United Kingdom (UK) this is due to changes in government policy with reference to funding mechanisms across the sector which has seen a reduction in financial support to UK higher education institutions. As a result of such changes students now assume responsibility for meeting a significant part of the fees associated with the courses that they are undertaking. As a result an increasingly 'market focused' and customer driven level of educational provision is being demanded by the key stakeholders namely government, employers and potential students.

This has encouraged a more dynamic approach to the management of education within many institutions with new approaches to the delivery of education and management of staff being explored. Given such a context this paper investigates the implementation of a 'lean thinking' approach to managing a UK Business School. This strategic development is intended to improve the overall performance of the organisation against an agreed set of metrics. Such metrics are intended to drive forward the School's ability to achieve one or more global accreditations which are increasingly being used as global benchmarks within an increasingly competitive market for both national and international students and research funding. The overall lean operating system covers all the fundamental elements of a system encompassing: structure, management and leadership, processes, tools and technologies, and above all seeks to engage staff.

Introduction

For business schools in the United Kingdom (UK) and other European countries, issues such as the influence of globalization and innovation, the value impact of research and the importance of clear perspectives about corporate social responsibility and leadership are fundamental to competitive success [20]. For British business schools in particular, the impetus to compete internationally is a result of the change in government policy concerning the status of foreign students, the need to undertake collaborative research, the search for additional funding as a consequence of reduced funding from central government and the pursuit of excellence [1]. Future competitive strategies within the Business School sector are likely to result in the increased use of global benchmarks to assess the performance of institutions. Already a key driver for business schools in mapping their strategic positions within the competitive environment has been accreditation [21], particularly with respect to

internationalization of programs of study as part of EFMD-EQUIS and AACSB accreditation bodies. Clearly, learning from peers and cooperating with them are not only essential in research but for institutional strategy, incorporating teaching and learning [14].

Literature Review

Business schools constitute a business sector in their own right and this business is internationalizing and becoming increasingly competitive such that higher education is now a global enterprise [9]. Business schools have ranked for a long time among the most successful and best appreciated institutions in higher education [14]. European business schools have responded to competitive pressures by increasing quality with more and more schools achieving accreditation and climbing the global rankings. In no other field have international rankings and accreditation been more widely and seriously introduced and practiced [14]. Programmes offered in European schools attract a mix of international talent giving students the opportunity to study in a truly global context.

The result has been that for many graduate business students the destination of choice for study is today Europe compared to the United States ten decades ago.[8]. Within Europe, Britain has become key destinations for international students. The reasons for this change are varied and include the fact that many European schools offer programmes that students can complete in less time and therefore, for less cost [8]. This is especially the case for full time MBA programmes and specialist Master programmes which usually take one year.

Impact of European Commission Policy on Higher Education

These trends are positive for European business schools which are attracting not only talent from India and China but from the regional and domestic locations as well [8]. International students make decisions on which country to study in primarily on their perceptions of the overall quality of the country's education institutions [13]. Solid and serious rankings help students to make their choices and are key mechanisms for benchmarking [14].

Furthermore, policies within the European Union relating to international study and cross-border higher education initiatives have aided the competitive stance of European higher education institutions. Cross border growth in Europe has been aided by The European Commission for Education and Training committing to the standardization of national systems within Europe and the European Commission's support for the Bologna Process [1,3].

The aim of harmonization has been to promote greater transparency in qualification structure amongst European higher education institutions allowing for increased mobility of students and faculty. Such policies along with the increased popularity of European business schools, means that regional competition is likely to intensify [8,21]. Consequently, European business schools now compete with each other to retain domestic students and attract international students [3].

Initiating 'Lean' within UK Higher Education

Given this background, over the last few years there have been an increasing interest in the application of business process improvement methodologies and techniques as a mechanism for improving the operational efficiency and competitive position of some UK Higher Education Institutions. This in itself mirrors a growing interest in developing or adopting new approaches to management across the United Kingdom (UK) public services. Lean, Business Process Reengineering (BPR) and Process Improvement Techniques such as Total Quality Management (TQM), Kaizen and Benchmarking have all been advocated as

means of enabling organizations to change in a way that makes their business processes responsive to changes in both economic and social conditions.

Such challenges therefore provide significant opportunities for researchers in the business field of operations management to reflect on current strategic change initiatives across the Higher Education sector and to engage with incremental operational change opportunities within Universities [19]. The development of this 'lean thinking' across the public sector has an emerging academic literature [17], with substantial operational and organizational benefits seen to materialise from adoption of a 'lean thinking' approach [15]. Although to date the most cited examples of lean application have been within the health services [18, 16].

There is much evidence that in other public service environments such as the police service [10,5,2] improvements in service performance, improved processing times and achieving 'better value for money' have resulted from such lean interventions [9]. For example, one area that has received increasing attention in terms of its applicability to the police service has been the concept of 'lean thinking' [10,5].

The research case study

Nottingham Business School (NBS) embarked on the preparation and implementation of 'lean' during the latter part of 2007. The drivers to implement 'lean' at NBS were many folds. With the increasing demand for business and management education in the UK and globally, NBS set itself the strategy to differentiate itself from the other 110+ business schools in the UK. The intention is to be internationally recognised for excellence with a mission to transform business and industry through creation, development, application and diffusion of cutting edge business and management knowledge and through the quality and readiness of the people it developed and educated.

The overall drivers can be summarised as below:

- 1- The challenges facing the university sector in the UK due to the changing demographic and funding environment as reported by successive government sponsored reports such as The Lambert Report [13] and then Leitch Review (2006) and later the Browne report [6].
- 2- Intensification of competition amongst business school in the UK and indeed internationally.
- 3- NBS' need for transformational *and* sustainable ways to implement change to speed up its development.
- 4- Creating reality and not simply rhetoric as to a business school which is run both effectively and efficiently.

The NBS Approach to Lean implementation

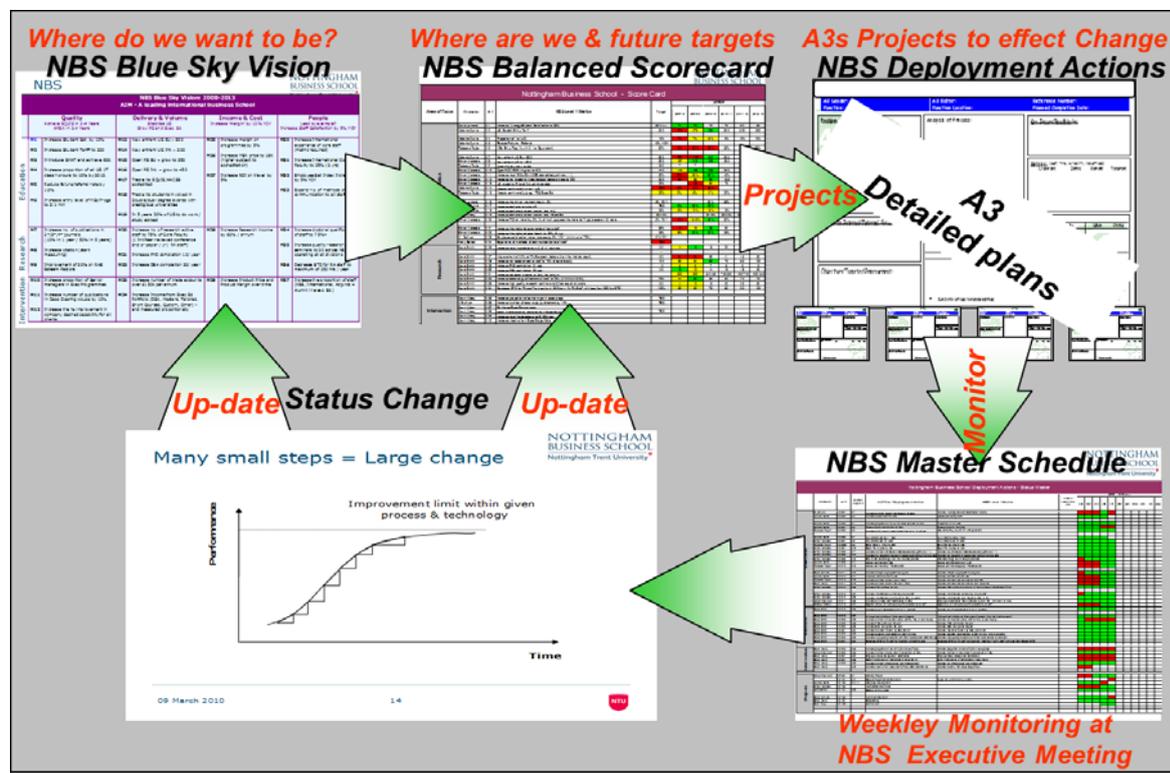
The NBS approach has been based on a previously successful introduction and implementation of Lean in the Jaguar/Land Rover (JLR) product development system. The NBS approach was deliberately chosen to be gradual and step by step. This approach was chosen as the best way to create a sustainable Lean as the operating system that will be delivering improvements at all times. The overall NBS Lean Operating System covers all the fundamental elements of a system encompassing: Structure, Management and Leadership, Processes, Tools and Technologies, and above all engages staff. This was seen as more advantageous than a tools and methods driven way of introducing Lean, which can often fade away after a number of business processes have been improved.

Details of Lean at NBS

As previously indicated the challenge facing UK business schools is to innovate and respond to an increasingly competitive internal and external market for their educational services. NBS has recognised this and identifies that alongside the assistance provided by accreditation agencies in terms of providing guidance to achieving certain quality control benchmarks that relate to the standing of fully accredited (AACSB, EQUIS, AMBA) business schools. There is an opportunity to revitalise and re-orientate many of the internal operating systems that are required to achieve such accreditation status and NBS as adopted a 'lean' variant approach.

The chronological account of the main aspects of the implementation of Lean Operating System is presented below. A sequence of developments were designed and rolled out to agree a common vision and agenda manifest in a 'Blue Sky Vision' and Balance Scorecard.

Figure 1- Key process linkages



A number of workshops amongst the leadership team culminated in an agreed Blue Sky document for 2008-2013. This Blue Sky vision approach is commonly undertaken within the manufacturing arena and is increasingly achieving recognition within higher education, although at this stage its wide scale implementation has not occurred although there are interesting examples of its adoption in a variety of forms across a number of UK HE institutions [19].

The NBS 'Blue Sky' Vision was organised in 4 Columns of Quality, Delivery & Volume, Income & Cost and finally People. Under each column the 5 year aims of the main activities of Education, Research and Intervention were articulated in terms of improved operational metrics, as shown in the figure 1. Under each Column the main targets of Quality, Delivery & Volume, Income & Cost, and People were also agreed and stated (Figure 1).

Each metric was then converted into annual targets and expressed in a balance scorecard. It was important to ensure that the scorecard is truly balanced and achievable and therefore the impact of each individual metric on the rest of the chart was carefully analysed and debated. The next stage was then to develop the various projects (A3s) that were developed to effect change. Each A3 is led by a project leader who draws on the resources that are necessary to achieve a satisfactory conclusion to the project. These are regularly updated and fed into the NBS Master Schedule.

Initially two members of the leadership team were assigned to each column and each was responsible for a set of deployment actions to achieve the target results for the following year. It was important that the Metrics and individual deployment actions had an member of the leadership team developing and delivering them. Therefore some 40 projects (deployment actions) expressed as an A3 were developed by the NBS leadership team.

The process of review of the A3s was therefore possible to start. The entire process of developing and agreeing overall mission, aim and vision of school and how they translate into a Blue Sky document and Scorecard took some 8 months in total taking NBS to the beginning of 2008. It was then possible to start the process of developing the A3s and then the review of A3s in a cadence could be started. This process was aided and facilitated by an NBS Visiting Fellow whom has had considerable expertise in implementation and running of Ford's Leanest plant in the world as well as an Lean Immersion Day at JLR's Lean Learning Academy at the Halewood Manufacturing plant. The relationship between Blue Sky, Scorecard, A3s and the overall Master Schedule is shown in (figure 1).

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In order to succeed with the Blue Skies Vision the NBSs leadership team (School Executive) recognised that without the understanding and 'buy in' from the rest of the staff within NBS then the implementation plan would have little chance of success. By the end of 2010 therefore a significant number of NBS staff had received training in Lean and were positively contributing to a significant number of projects arising from the A3s.

Over the last 4 years the original template and Blue Skies Vision has undertaken a number of iterations as would be expected in such a dynamic process. As of July 2011 the original scorecard has been revised into 4 core areas of business namely education, research, executive education & engagement and external engagement.

As previously indicated each key business area has identified 'champions' and specific A3s with project plans and performance targets, Each key business area is routinely analysed on a monthly rotation basis where the lead project officer reports directly to the School Executive and reports on progress of the A3s.

To illustrate the dynamic nature of the process the latest iteration (2012) of the NBS Blue Sky Vision (2012-15) the key areas of business have been redefined and are now classified as Education, Research and Business Engagement. This is seen more appropriate as the Business School's vision is to become one of the UK's leading business focused business schools (Figure 2). Within each of these key areas of business there is an identified 'champion' who has responsibility for updating the A3s and ensuring that the metrics associated with each of the projects are updated. Clearly the long term nature of the initiative demands a level of regularisation in terms of meetings and the cadence continues on a weekly cycle which in effect ensures that each area of business is reviewed on a monthly basis.

Figure 2 - NBS Blue Sky 2012 Issued Jan 2012

NBS Blue Sky Vision 2012-2016

Mission: To provide education and research that combines academic excellence with impact, transforming business and organisations through knowledge and people

Vision: To be one of the UK's leading business-focused business schools

	Education			Research		Business Engagement	
	UG	MSc	MBA	PhD/DBA	Outputs	Executive Education	Corporate Relations
Quality	Average Entry Standards to Reach 360pts Graduate Employability to Reach 95% Graduate Prospects to Reach 85% Student Satisfaction in the Top 30 nationally Good Honours to Reach 66% Teaching Quality to Reach 80%/4.0+	Entry Standards to reach 50% at 2:1 or above Graduate Employability to Reach 90% Student Satisfaction to Reach 95% Teaching Quality to Reach 80%+	Rank in the FT Top 100 Employment at 3 Months to reach 90% Student Satisfaction to Reach 95% Teaching Quality to Reach 80%+		Rank in the top 40 REF Rank in the top 25 Research Power	Rank in the FT top 65 for Exec Ed. Delegate Satisfaction to Reach 95% Teaching Quality to Reach 80%+	Client Satisfaction to reach 95%
Quantity	Marking Turn Around Time 100% at 3 weeks New International Students to reach 350 New Home/EU Students to reach 850 Exchange Nos. to reach 200	Average Weighted Salary To Reach \$50K New International Students to Reach 400 New Home/EU Students to be at 150*	Average Weighted Salary To Reach \$75K Salary Increase to Reach 60% FT to Reach 50 / Year EMBA to Reach 25/ Year	PhD Completions to reach 7 /Year DBA Completions to reach 15/Year	2*/3*/4* Publications to Reach 50/Year		Strategic Partnerships to reach 5 Sponsoring Companies to reach 10 Corporate Members to reach 25 Sponsored students to reach 100+
People		International Faculty to Reach 30% AQ Target 50% + Core Faculty PQ Target 50% of Core Faculty		80% of PGR supervisors at AQ standard	REF Returnable to reach 40+ Research Active to Reach 60+	Faculty Participation 60% of Core at PQ	Alumni engaged to reach 100+
Money	Home / EU to reach £21M International to reach £8M	Home / EU to reach £5M International to reach £1M	Total to reach £1.2M		Grant Income to Reach £500K / Year Contract Research to Reach £500K / Year	Overall Income to Reach £4M	

Discussion and Conclusions

For its part NBS has adopted a variant form of lean that suits its strategic objectives. The usefulness of the project lies to a large extent in its transparency and clear levels of reporting and ownership of individual projects. To date the organisation has moved closer towards its objective of creating a business school that has the future potential to stand the scrutiny of external validation panels. The engagement process with all staff could however be improved however is to a large extent predicated on the current dynamics of the higher education system in the UK which is undergoing substantial transformation and by implication facing substantial challenges.

Clearly the need to pursue quality and to maintain an effective control of the financial management of all Higher Education establishments is a clear strategic priority for the current UK government (2012). For its own part NBS recognised the need for a new forward thinking and innovative approach to delivering its services back in 2007. Since then it has engaged in a determined effort to rationalise a particular approach to lean implementation

within the Higher Education sector. The nature of the delivery is one of constant evolution and one that has at its core value the delivery of excellence with its staff being a central focus of its delivery. There is a recognition that only through the commitment and personal professional development of its staff can all the objectives of the Blue Skies mission be achieved. This is one of the conclusions drawn from an analysis of lean implementation within UK business schools and universities [19].

Maintaining staff engagement with the ongoing process will have a major impact on the success of this 'lean' initiative as evidence suggests that effective 'lean' implementation is predicated on the construct of people, notably 'front line staff', to make it happen. Such concerns are emphasised in other public sector organisations such as the police (Berry, 2009:11) who identifies both the cost and 'danger that (police) forces will seek to apply a few 'lean' tools and techniques to produce impressive short-term results, instead of seeking sustainable, continuous improvement and a true cultural shift.' Further, developing a culture that creates the involvement of everyone in the organization is critical for the implementation of the lean philosophy' [18].

This conclusion may begin to explain why not all lean implementation initiatives have led to such positive outcomes. [7] argue that key limitations lie in the fact that the impact of environmental context or organizational contingencies can affect the relationship between lean practices and cost reduction. This suggests that regardless of establishing *what* lean is, it remains important to establish *how* best to become lean in various contexts [7]. As a consequence the reality maybe that in the higher education context the adoption of some of the principles of 'lean' may prove useful within a broader framework of progressive operational management.

This has consequences for the impact of operational research within organizations such as university business schools. Given the complexities of higher education it is unlikely that even progressive and innovative developments in operational research will solve all the complexities of increasingly global operations. Success in this respect is more likely to arise from a blended, multi-disciplinary exchange of ideas than from a single discipline of 'Operations Management'.

References

1. Ahola, S. (2005). 'Global and local priorities in higher education policies: A headache at the national level?', *Tertiary Education and Management*, 11, pp. 37-53.
2. Barton, H. and Barton, L. (2011) 'UK Policing in the 21st Century'. *International Journal of Public Sector Management* Vol.24. No.2, (2011).
3. Barton, L; Ambrosini, V and Bilsbury, J; Barton, H. (2011). *A Comparison of UK and French Higher Education Establishments* (Unpublished)
4. Bicheno, J. (2004). *The New Lean Toolbox: Towards Fast, Flexible Flow*. PICSIE Books.
5. Berry, J, (2009) "Reducing Bureaucracy in Policing: Full Report". London: Home Office.
6. Browne (2010) *Securing a Sustainable Future for Higher Education, An Independent Review of Higher Education Funding and Student Finance*, Lord Browne, October 2010, London, The National Archives.
7. Browning, T.R. and Heath, R.D.,(2009). Reconceptualising the effects of lean on production costs with evidence from F-22 program. *Journal of Operations Management*,27, 23-44.

8. Chisholm, A. (2011), 'European Business Schools, A Growing Market', *EFMD Global Focus*, 03, 1, www.efmd.org,
9. Dameron, S. and T. Durand (2009) '2020Vision: A dual strategy for European Business Schools', *EFMD Global Focus*, 03, 1,
10. Flanagan, R., (2008). *The Review of Policing – Final Report*. London
11. Hines, P. and Lethbridge, S., (2008). New Development: Creating a Lean University. *Public Money and Management*, 28(1), 53-56.
12. HM Treasury (2006). Lord Leitch, The Leitch Review of Skills: Prosperity for All in the Global Economy - World Class Skills – Final Report, December 2006, London, The Stationary Office.
13. Lambert, R (2003). The Lambert Review of Business - University Collaboration: Final Report, December 2003, HM Treasury, London.
14. Noorda, S. (2011). 'Future business schools', *Journal of Management Development*, 30, 5, pp.519-525
15. Papadopolous, T. and Merali, Y., (2008). Stakeholder Network Dynamics and Emergent Trajectories of Lean Implementation Projects: A study in the UK National Health Service *Public Money and Management*, 28(1), 41-48.
16. Provonost, P. and Vohr, E.,(2010.)*Safer Patients, Smart Hospitals: How One Doctor's Checklist Can Help Us Change Healthcare From Inside Out*. Hudson Street Press.
17. Radnor, Z. and Walley, P., (2008). Learning to Walk Before We Try to Run: Adapting Lean for the Public Sector. *Public Money and Management*, 28(1), 13-22.
18. Radnor, Z. and Walley, P., (2008). Learning to Walk Before We Try to Run: Adapting Lean for the Public Sector. *Public Money and Management*, 28(1), 13-22.
19. Radnor, Z. and Bucci, G. (2011). 'Analysis of Lean Implementation in UK business schools and Universities.
20. Thomas, H. and Cornuel, E. (2011), 'Business school futures: Evaluation and perspectives', *Journal of Management Development*, 30:5, pp444-450.
21. Tullis, K. J. and J. P. Camey (2007). 'Strategic implications of specialized business school accreditation: End of the line for some business education programs?' *Journal of Education for Business*, September/October, pp. 45-51.