

CUSTOMER VALUE AND LEAN OPERATIONS IN MASTERS EDUCATION

Cameron WATT, Jannis ANGELIS and Damian CHAPMAN
University for the Creative Arts, and Royal Institute of Technology

ABSTRACT

There has been a shift towards greater independence and choice for students, as people want more information and control over their education. Moreover, universities face an increasingly complex list of challenges, ranging from cost pressures, increased levels of demographic and cultural diversity to significant competitive threats coming from both emerging economies and private universities. Seeking to better, and perhaps cheaper, manage the situation, universities have sought support in implementing industrial processes. This follows similar process implementation found in public organisations such as healthcare, where tasks throughout the organisations are set in accordance with what the end user values. This paper explores the role of the customer as specifier of value and the tension of customer wants versus student needs in a lean higher education environment. This role lies at the heart of Lean principles and operations, which poses a fundamental problem when implementing Lean in higher education due to the sometimes ambiguous reality of the student as customer. The paper identifies a potential misalignment of perceived want and need along the value chain, with associated implications to the design and provision of Masters level education. Empirically, the paper offers lean implementation advice, and conceptually it expands on the debate of appropriate lean application in the higher education sector.

Keywords: Lean, higher education, masters, course design

1 INTRODUCTION

Universities around the globe have for some time faced an increasingly complex list of challenges ranging from cost pressures, increased levels of demographic and cultural diversity to significant competitive threats coming from both emerging economies and private universities (Baldwin 1994, Brown and Oplatka 2006, Eagle and Brennan 2007, Moon et. al. 1998 Oldfield and Baron 2000 and Scott 1999). In addition students have to deal with a 'new normal' where economic instability and highly volatile jobs markets have made their career futures far more uncertain and the fees for higher education continue to rise. In response their expectations of the higher education experience is beginning to shift towards a more consumer attitude that demands more choice and control over their education (Brown and Oplatka 2006 Delucchi and Korgen 2002 and Oldfield and Baron 2000). In this paper, we explore the issue of customer focus in higher education and specifically look at customer value and lean operations in Masters level courses, where high tuition costs and wide range of competitive programs makes customer value an increasingly important issue.

2 CUSTOMER FOCUS IN HIGHER EDUCATION

Over the last fifteen years political pressure in the UK has driven universities towards a more market orientated position in a much publicised attempt to cut costs, increase efficiency, effectiveness and accountability as well as widening access. (Deem 2004, De Vita and Case 2003, Brown and Oplatka 2006, Oldfield and Baron 2000). Recently focus has been on improving the quality of people entering the workplace through greater customer-orientation and partnerships with industry (Baldwin 2006 and Cruickshank 2003). While such a customer orientation may not be new in the USA and other countries (Bay and Daniel 2001, Delucchi and Korgan 2002, Moon et. al. 1998, Pitman 2000, and Scott 1998) its introduction within universities whose cultures have been more custodial, and socially driven in nature as well as being change resistant has potentially created serious adoption problems (Baldwin 1994, Eagle and Brennan 2007, Franz 1998, and Hemsley-Brown and Oplatka 2006). Many

protagonists of such a customer focus argue that the benefits to student, university and industry are multi-level including increased flexibility and diversity of workforce skills cost cutting to an overall positive student experience that will increase the numbers of international students attending universities (De Vita and Case 2003, Eagle and Brennan 2007, Harvey and Green 2006, and Popli 2005).

Clearly such a paradigm shift provides managers and lecturing staff with a major challenge and many not convinced that such a change is required, or indeed beneficial (Scott 1998 and Franz 1998). A number highlight the notion that such a position could be seen to be at odds with the fundamental philosophy of university education (Baldwin 1994, Bay and Daniel 2001 and Eagle and Brennan 2007). This in turn raises the questions of whether increased levels of such market-led initiatives could lead to the plummeting employee motivation, rising levels of stress, and staff turnover seen in other industries that are facing similar challenges such as the NHS (Burnard *et al.*, 2000; Gelsema *et al.*, 2006; Hall *et al.*, 2006), and whether these will worsen in a Lean environment (Conti *et al.*, 2006; Angelis *et al.*, 2007).

In addition it has been suggested that such a move is forcing already limited resources to be focused away from lecturing to areas that are perceived to be more public relations orientated so creating unfair and unrealistic expectations of what can be achieved by lecturing staff (Ballard 2004, Bay and Daniel 2001, Clayson and Haley 2005, Kotler and Fox 1995 Sirvanci 1996). Indeed it could be argued that such a situation undermines the professional status of lecturers shifting them from educational; expert to service provider while reducing students' sense of personal responsibility towards their own learning. The resulting passive, possibly lazy, yet demanding student (Bay and Daniel 2001, Franz 1998 and Lammers *et al.* 2005) who expects their needs and wants to be met at an almost bespoke level could end up being bitterly disappointed. Such an argument raises an interesting question: Should Masters level education be need (educational and operational) or want (customers aspirations and desires) driven and what are the implications of this in determining how value can be specified in a Lean educational environment?

3 CUSTOMER VALUE IN LEAN EDUCATION

Lean thinking has wide applicability in many different countries and industries (Womack *et al.*, 1990; Womack and Jones, 2003), with demonstrated potential for achieving high productivity and quality. (Snell and Dean, 1993; Sakakibara, 1997; Lowe *et al.*, 1997; Bushell, 2002). Empirical evidence by Shah and Ward (2003) and Fullerton *et al.* (2003) shows that Lean contributes substantially to the operating performance of organisations. With its roots in the Toyota production system, it is increasingly implemented in both private and public services. But while lean principles have been identified as appropriate for the public sector in general, implementation and sustainability within this context remains a challenge. (Jones, 2004; Westwood *et al.*, 2007). Often this is partly due to the dynamics between a number of different powerful stakeholders, who may be enabling or inhibiting implementation, depending on views and agendas or on significant differences of philosophy and culture (Angelis *et al.*, 2007).

The role of the customer as value specifier lies at the heart of the Lean philosophy (Womack and Jones, 2003) and yet potentially poses a fundamental problem when implementing Lean within a Higher education environment due to the ambiguous notion of the student as customer (Baldwin 1994 and Franz 1998). We define a customer as an individual or group who has the power to specify and pay for services or products they want and value. Value in lean operations is defined by customer value, not only in the end product, but also in the chain of processes that take place for an end service to be delivered to the customer. Hence for effective lean operations there needs to be a clear view of the customer without confusion of multiple stakeholder pressures and requirements. Waste is defined as what costs time, money and resources but does not add value from the customer's perspective. By identifying customer value, lean operations' put pressure on the provider to be efficient and effective in the provision of their services. (Drummond-Hay and Bamford, 2007). Because lean principles and techniques were developed in the private sector where determining the customer and what they value is more straightforward than for the public sector where multiple stakeholders and conflicting philosophies exist. Customer value in higher education may mean many things including improvements in areas such as accommodation, social facilities, number of modules offered, marking times and post education employment opportunities. While a number of defined value constructs may be seen to be at the heart of a quality postgraduate education in the eyes of the provider they may not

be viewed in the same way by potential or existing students (Eagle and Brennan 2007 and Winston 1997).

4 HOW DO WE SPECIFY VALUE IN A MASTERS CONTEXT?

A stakeholder is defined as “any group or individual who can affect or is affected by the achievement of the organization’s objectives” (Pouloudi and Whitley, 2000:46). Within a Higher education context these stakeholders are multiple and often ideologically, geographically, socially and culturally diverse (Brennan and Bennington 1999 and Bristow 1998) which results in some significant tensions developing between the wants and needs of each party and a lack of clarity in terms of what value is and who should specify it. Historically higher education provision was a need driven, resource starved and socially accountable process delivered by autonomous professionals holding expert knowledge. Students received and experienced an education specified by a curriculum designed and approved by the analysis and opinions of said professionals. Although student views and needs may be considered they have tended to be done so from a pedagogical perspective rather than from a customer-supplier one. As such students have not directly dictated the overall content, structure or delivery format they receive. In other words, students have not been able to specify or demand what they want and therefore are not able to behave as a traditional customer.

Generally it is agreed that customers are autonomous, knowledgeable people, motivated by aspirational wants and perceived needs, who are willing and able to determine what they believe is valuable and assess, from a number of competing suppliers, who will be able to provide them with that value (Johnston and Clark, 2005). Relationships between buyer and supplier are essentially easily defined and understood and if customer is unhappy with a service they can simply choose to buy from any number of suppliers in the future. However, many students do not fit this characterization as easily. Admittedly Masters students, unlike undergraduate students, do pay in full for their education and the market orientation that exists today, provides them with a global wide choice of universities. However it is their nature and disposition that needs to be taken into consideration when considering the student’s role as specifier of value. Although some may have relational experience many do not and even those with some experience rarely have a significant depth of knowledgeable around the subjects and issues that form the core of their chosen course. In addition even fewer will have the pedagogical background or knowledge required to design and deliver post-graduate education and most will not be in a position to fully appreciate the value of their education until a number of years in the future (Bay and Daniel 2001). Many potential students, particularly overseas ones, can be unsure and vulnerable due to a lack of language skills or as the result of the sudden shift in cultural norm, structures and systems they experience coming to a the UK, rather than being the knowledgeable secure, powerful and autonomous individual one would expect a customer to be. Having said which in today’s increasingly competitive environment it may be a risky approach for universities not to take into account the wants and needs of students, after all fees are high, providers are numerous and potential students are using independent social networks to help inform their choices. The challenge is finding a set of tools that will achieve the correct balance of meeting the perceived value held by students and the actual educational value inherent in the course.

To some extent we believe the answer lies in taking a more collaborative (Bay and Daniel 2001) and service focused approach to Masters provision (Watt, Ely and Chapman 2010) but we would also suggest that Lean techniques such as Value Stream Mapping which seek to eliminate wasteful activities and identify value creating ones through the active participation of all appropriate stakeholders would be a key process. In our own work over the last two years teaching staff, industry representatives and alumni students were brought together to map out how the process currently operates and identify waste and perceived value creators echoing many methods for mapping value streams (Chen et. al. 2008, Lian and Van Landeghem 2005, Lummus et. al. 2006 and Rother and Shook 1998). The outcome of these initial sessions reveals that all participants identified quality as key to delivering value and perhaps surprisingly that its definition did not vary significantly between parties. In particular conforming to an expected level of performance in terms of one to one tutorial time plus classroom delivery was seen as central. In terms of delivery quality was defined by students, practitioners and a number of staff as the ability of lecturers to, engage, challenge, entertain and educate. In addition while such approaches as self-directed learning and combined, cross curriculum delivery were seen as having cost benefits they were viewed by students and many lecturers as wasteful in terms of lost teaching/learning opportunities. That is not to say that forms of cross working

were not seen as value creating, indeed combined projects that involved students from a number of courses working together were seen as very advantageous particularly when high levels of industry involvement occurred. The view being that such projects provided a context where theory could be applied in a safe yet challenging space. It is also interesting to note that many students felt that quality also related directly to the number of modules offered and resulting high levels of work demanded of them which does counter some ideas of student/customer as a passive learner (Bay and Daniel 2001, Franz 1998 and Lammers et al 2005). Access to effective learning resources such as electronic databases, libraries and IT were also seen as key satisfiers but were expected as a standard not as an enhancer to quality. Finally students and practitioners both emphasized that effectiveness in terms of improving professional practice and employability was core to understanding quality in this context though it was agreed that gauging value in such terms was harder due to time-lag echoing the concerns of Bay and Daniel (2001).

Quality as a value construct was followed by speed in the form of timely and easy access to teaching staff and learning services provided both geographically and online as well as in terms of availability and fast throughput time of marking and ongoing feedback. Dependability such as acquiring accurate information, fulfilment of delivery deadlines and limited cancellation of lectures were seen more in terms of core operational processes and basic student needs than aspired wants. This could easily be dismissed but highlights the importance of achieving fundamental delivery systems and structures and the value they deliver to the education process and student experience. Interestingly flexibility was stated in terms of enhancing service quality via innovative forms of classroom delivery and projects as well the ability to staff to adapt to the needs and wants of the cohort, again emphasizing the value the participating parties placed on the teaching skills of the lecturer. Perhaps not surprisingly cost (not course price) had limited impact on student or practitioner preferences while teaching staff remained frustrated with often significantly reduced budgets viewing it as the key barrier to delivering a quality educational experience.

5 CONCLUSION

While in no way definitive our initial work has highlighted a number of interesting issues. First Lean thinking requires that value is clearly articulated by the customer but the difficulties that this throws up in the higher education sector have not yet been effectively dealt with. As previous studies illustrate there is no agreement as to the role and nature of students as either customer or specifier of value either in a undergraduate or post-graduate context. At Masters level the relationship should be somewhat easier to define due to the increased commercialization of the sector with particular reference to the targeting of international students however this is not necessarily reflected in the value allocated to their preferences by the other stakeholders. It is interesting to note from our limited work that while former students, lecturers and practitioners agreed on some key operational aspects of course design and delivery the students provided very limited input in terms of course content. When questioned they admitted that while they had some broad ideas about what should be covered at the outset of the course their limited knowledge at that point would have been a handicap in specifying course content. They felt that this might be better left to lecturers and practitioners. We would concur with this view and believe lecturers and practitioners are better positioned to state what subjects and theories ought to be focused on rather than the student him/herself because education is primarily need rather than want driven. We accept that even Masters students are unable to behave as pure customers and may not be in the best position to determine their educational needs and while they may be able to articulate 'wants' as a typical customer might those wants may not have significant relevance to their educational needs. However we believe that it is imperative for student wants to be valued and met in a far more robust manner than many universities and Higher education institutions have done so to date. We acknowledge that promoting a customer focus may sit uneasily in institutions that have not traditionally been market orientated but if they are to survive and prosper in this overcrowded sector the student will need to be viewed in a more 'customer' context where their view of value significantly shapes the operational design of courses. From a Lean perspective this issue becomes even more critical.

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