ADDRESSING THE CHALLENGES OF LOGISTICS AND SUPPLY CHAIN EDUCATION: A CASE STUDY OF PROGRAMME DEVELOPMENT IN THE UK

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Abstract

Logistics in the UK is perceived as a sector where qualification levels could improve: the sector is viewed as underperforming in training and education. Representative professional and trade bodies within the sector actively address this challenge. The research derives from the work in a knowledge transfer partnership project between a representative trade body in the sector and the University of Westminster. A principle deliverable from the project has been development of a new Programme in Training and Education tailored to the needs of the sector. New facilitating structures to engage a range of stakeholders have additionally been established. The purpose of this paper is to present an overview of the knowledge exchange process within the project and to present an evaluation of the application of service quality theories in the development of the new service.

The paper focuses on the knowledge exchange elements of the project in developing the programme as a new service for a membership organisation. Participatory observation, project diaries and formal project documentation included reports on knowledge exchange comprise primary data sources.

The paper considers the case of service development in logistics training and education in a representative trade body.

The knowledge exchange contribution to the development of the new service, while significant, highlight the challenges of effective engagement of the service users for membership organisations.

The research is exploratory and covers the development phase for the training and education service in a case study organisation. The normal caveats of single case study research apply.

Further research will initially focus on methodologies for the evaluation of knowledge exchange. The practical implications concern use of knowledge exchange in addressing business engagement in logistics training and education and fostering university-business collaboration.

Key words: Education, service development, knowledge exchange, knowledge transfer partnerships

1. INTRODUCTION

Logistics is a major sector in the UK economy employing 2.2 million people, or one in twelve of the working population. Forecasts to date have been for growth driven by demographic and technological changes, changing patterns of consumption and a recovering economy. However, Logistics is perceived as a poorly qualified sector with a problem in attracting new entrants (UKCES, 2014). The research presented here derives from a two-year project with the case study organisation which focuses on a specialist subsector in the Logistics industry.   The wider context of the growth of Urban logistics, the importance of addressing sustainability and the role of global supply chains have shaped an applied approach to the research associated with the project.

The case study concerns a two-year Knowledge Transfer Partnership project aimed at developing and benchmarking a range of new value added services/products for the case study organisation to offer to business members in the logistics sector across the UK.   A Knowledge Transfer Partnership (KTP) is a relationship between a company and an academic institution where a project of strategic importance to the company is undertaken by a KTP Associate, typically a young graduate or post graduate. (KTP, 2014). In the United Kingdom, KTPs are an established government funded programme partnering Universities and business, aimed at improving business competitiveness and efficiency, typically through encouraging business growth.

The context of the work draws on management research in Trade Associations in which there is now renewed interest (Rajwani et al., 2015). The initial work of the project utilised theory from Service Quality (Johnston & Kong, 2001; Johnston, 1995) to develop a questionnaire for members of the Trade Association in order to elicit service priorities and desired service characteristics. Subsequent service development focussed on Training and Education, therefore research perspectives in Supply Chain and Logistics education and training additionally inform the research.

This paper presents initial findings from project work with the case study organisation covering business perceptions of challenges and service needs in the logistics sector. As a preliminary paper based on practical results, academic literature is cited in each section to evidence sources used in the course of the project. The role of knowledge exchange within the project is outlined and the use of theoretical perspectives in Service design and development assessed. The objective is to conduct a preliminary assessment of project outcomes from the development phase using theoretical perspectives from service management and to explore the potential for relating efficacy in service provision to the role of Trade Associations as "Institutional Entrepreneurs" as outlined in Rajwani et al. (2015) discussion on use of institutional theory in management research on business association types.

2. BACKGROUND TO THE CASE STUDY IN A UK TRADE ASSOCIATION

2.1. Trade Associations

Boleat (2003) defined TAs as representative bodies for groups of companies with common interests. May et al 1998 point out that membership of trade associations is the most frequently used method for business representation and as such, governments have viewed Trade Associations as a means of improving communication between industry sectors and government and of raising standards and thus competitiveness in these sectors. A principal role of TAs is seen as representation to government, particularly on regulatory issues affecting members, there is a tension here between the pre-emptory interests of self-regulation within an industry sector; Larrain and Prüfer (2015) provide a recent example of research showing benefits of this in differing legal environments.

Business Associations exist in most countries but in the UK, are characterised by voluntary membership. Within the UK, Bennet and Ramsden (2007) identify over 5000 trade and professional associations, of which nearly half contain less than one hundred members. Indeed, echoing complaints dating back to the 1980's in the UK, Macdonald 2001 accepted that from a government view point, too many TAs exist. Recent work in New Zealand (Battisti & Perry, 2014) confirmed that there is no real impetus for TAs to be replaced with fewer sector based associations.

The literature on TAs has explored the tensions between the representative function: "the logic of influence" and other member benefits: "the logic of services". Bennet and Robson (2011) provide a useful analysis of the politics and economics of the UK Trade Associations Services Market. They highlight that Services and how they are bundled provide Associations with their "unique selling point", underlining the importance of Service Design and Service quality for this sector. Bennet's earlier work (Bennet & Ramsden, 2007) showed that many SME companies hold more than one membership of TAs as they in turn, construct their own "bundle" of service requirements.

Tucker (2008) in research on how TA's manage their industry reputations, acknowledges the predominant focus of management literature on the unit of the firm but argues for the importance of research in TA as these "operate as the centralized cooperative component of inter-organisational relationships". More recently, Rajwani et al 2015 argue that management researchers need to give renewed attention to TAs and their impact on companies, industries and societies.

2.2. Case Study Organisation

The Case Study organisation may be characterised as a medium sized TA representing a specialist sub sector in the Logistics industry. At the start of the project, it had recently reviewed overall strategy and identified service provision as an area for development. The UK Trade Association Forum survey in 2010 found that over half of TA's undertook reappraisal of their mission and strategy and over 60% were developing new services. Services provided by TA's are differentiated in a number of ways, for example, individual and collective services and "core" services

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as opposed to "affiliate" services. The majority of members of the TA are Small to Medium sized Enterprises, in line with findings that TA membership is dominated by micro and SMEs, further, it is reported that many of these dip in and out of membership, depending on their own perceived needs (Bennet & Ramsden 2007) requiring TAs to continually revisit value propositions to members.

Given that TAs themselves are typically small organisations, TA service provision to members must be of services where the TA can deliver this more efficiently than other forms of organisational associations. TAs are best placed to provide services where:

a)   The service is based on a representative function;

b)   The services are closely related to the membership of the TA such as annual conferences, themed seminars, exhibitions and statistical schemes. The TA advantage here is in lower marketing cost and ability to secure more relevant speakers and exhibitors;

c)   The services are based on the expertise of the secretariat (the direct employees of the TA, including the Chief Executive), which has either been developed with time or it is a natural function of the representative work.

In this case, the core services provided by the TA were:

1.   Representation

2.   Quasi-commercial financial and advisory services (particularly valuable for small companies)

3.   Provision of information, advice and guidance on best practices

4.   A gateway for purchasers of the goods or services provided by members (Affiliate Services)

Other types of services focussed on information provision to members, including:

a)   Factual information and guidance on relevant legislative, regulatory and related matters;

b)   Aggregate statistics of members and other statistics and market information;

c)   Information on general policy developments;

The project aimed to develop and implement a range of new value added services for the Association to offer to its members. Overall, the aim was to support the enhancement of the value proposition for current and prospective members. In order to implement new services, internal efficiency in the association was also addressed to ensure capability and capacity for service provision and monitoring.

2.2.1. Project Delivery

The first phase of the project covered familiarisation with the case study organisation, business members and the logistics sector in the UK. This phase produced an initial list of areas for potential service development, including training services (principally information for members on providers and courses) and development of national qualifications. However, a wide range of other potential services such as business generation support services, assistance with responding to Invitations to Tender and services to assist members in improving sustainability were also considered.

At this stage, knowledge exchange identified service development theory, stakeholder engagement and management of process change as academic inputs to the project.

Phase 2 covered design and launch of a membership survey with responses collected on line. Using the knowledge gathered through interaction with members and field work in Phase One a detailed questionnaire was developed by the project team. The purpose of the survey was to improve understanding of membership perceptions of both the kinds of services of benefit to them and the service delivery requirements. The overall planning of this phase was underpinned by the ten stage road map (Figure 1) for improving customer experience of services set out by Johnston and Kong (2011).

Figure 1. Road map for improving the Customer Experience
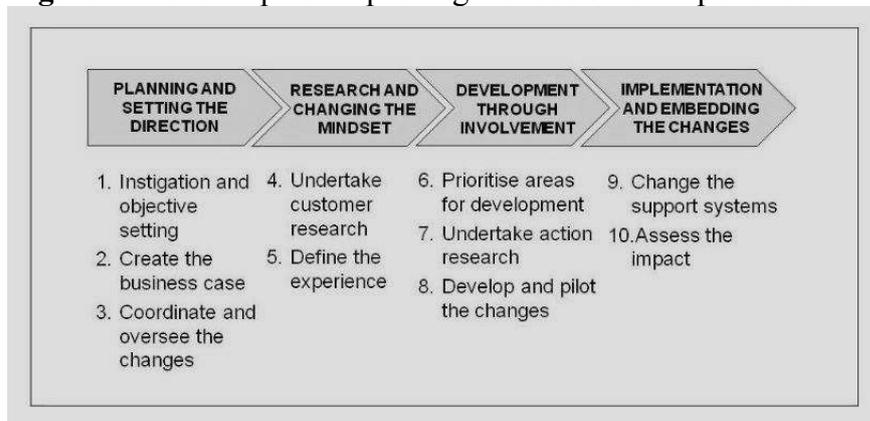
Source: Johnston and Kong 2011 p.17

2.2.2. Methodology: Membership Survey

The development of the questionnaire used the work of Johnston (1995) on service satisfiers and dissatisfiers which showed that a majority of service characteristics can act as both sources of satisfaction and dissatisfaction. Using the findings on predominate determinants, three broader categories for assessing service quality were formulated: Responsiveness, Assurance, and Communication. Questions set, expanded on these so that mapping back to key determinants was supported in data analysis.

Survey development included consultation with stakeholders and pilot testing with senior members of the Association. The survey was launched through the specialist online research website Survey Monkey and was open for a period of ten weeks during which time it was promoted through specialist publications for members, social media, email reminders and a telephone campaign targeted on members in the SME sector to ensure a representative sample across all the categories of membership, based on size of warehouse space managed but also including suppliers into this sector (representing an associated but not full membership category).

The overall response rate of 11 percent was the highest achieved by the Association. Analysis of distribution of responses by category of membership and by

geographical location reflected the actual membership distribution, ensuring the survey results reflect an accurate representation of membership. Survey follow up field work with 15 respondents, selected to reflect all membership categories, was conducted to support the analysis of findings.

It should be noted that for this case study on logistics providers, the definition utilised by the TA concerned specialist provision (warehouse space) as opposed to the broader definitions on Logistics Service providers discussed in the literature. Marasco 2008 provides a discussion on this definition and adopts a broad definition of third party logistics providers as a relationship between buyers or sellers and a logistics service provider in a particular supply chain. In this case study, the definition applies to the organisations holding full membership of the TA, the results of which are presented below. More research is needed to verify findings in the broader logistics service sector.

2.2.2 Summary of Findings for Training and Education

The findings presented here relate to the survey responses subsequently used to gain stakeholder agreement on prioritising new service development in Training and Education. The characteristics of respondents was analysed through their stated job role and differed by company size and type (Figure 2). In the membership category representing SMEs, the majority of respondents were company owners or Chief Executives (40%) with responsibility for oversight of the business. The respondents from larger companies were predominantly directors and heads of departments (46%), whose responsibilities included mainly supply chain related activities but also sales and business development.

Figure 2. Survey Respondents by Job Role
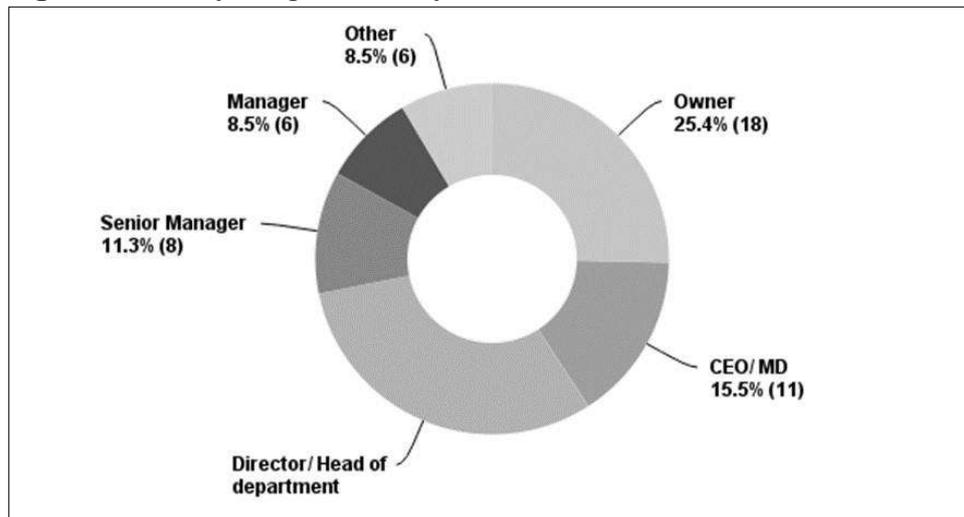
Source: Membership survey 2014

The survey data on perceptions of key challenges showed further differentiation in SME and other members. Smaller members identified increasing competition and investment in technology and ensuring sources of finance. Shortage of skilled staff

and rising energy costs were perceived as challenging particularly by members where the business was experiencing growth.

Results suggest that smallest members were considering, but have issues with, introducing a technology to support logistics operations, while larger members identified successful implementation of an Enterprise Resource Planning system as a challenge.

Cost efficiency was a major issue for the SMEs in membership, as opposed to the larger companies where programmes to control costs exist. Capacity constraints and property availability were also identified as other areas presenting challenges to members.

Table 1. Identification of major challenges in the sector

Challenge	Percentage responding
Need to improve efficiency of operations	47
Shortage of Skilled Staff	41
Increased Competition	40
Improving the visibility of operations through investment in Technology	29
Rising Energy costs	21
Maintaining Robust Risk Management	19
Introducing ERP	12
Ensuring adequate sources of finance	6

Source: Membership survey 2014

The campaign priorities question (Table 2) highlighted membership difficulties in agreeing single overall priorities as in all three cases, over 85% of respondents saw at least potential value in each campaign.

Table 2. Member Campaign Priorities Percentage responses

Campaign	I would value	Of some value	Potentially of value	Limited value	Not relevant
Introduction of more apprenticeship schemes in the logistics industry	43	26	17	6	6
Improving practices in the industry	48	20	20	2	9
Addressing legislative impact in the sector	44	33	11	2	9

Source: Membership survey 2014

This had been anticipated in survey design and were followed by specific questions on firstly, whether the Association should develop nationally accredited qualifications in their logistics specialism and secondly, if the Association should deliver "branded" training, implying Association endorsement of specialist training providers. The responses to these two questions, indicated that members thought these high priorities, in total for both questions, over 85% of respondents thought these were either a priority or a high priority for the Association.

2.2.3 Identifying priorities for development of services

Based on the overall survey results, the project work then evaluated a range of service development opportunities using criteria shown in Table 3. Services related to training and education were initially assessed as high cost and value to the external market but carrying risk of demand uncertainty. However, development of the service was agreed as the survey results on the questions presented demonstrated this was the single area where membership agreement on value was consistent and could arguably be matched the challenges identified across the membership and thus could be developed through involvement of members and other stakeholders as set out in the Road map for improving customer experience.

Table 3. Service evaluation criteria employed in Phase 2

1. Service Development Requirements: Cost estimates:
i.   Service Standard specification including quality and reliability
ii.   Legal requirements compliance
iii.   Installation, implementation, user training
iv.   Ease of development – costs and time
2. Resourcing
3. Running costs – new process and maintenance
4. External market
a)   Benefits to members
b)   Price and Sales potential
c)   Competition
5. Marketing and promotion

Source: Adapted from Hollins & Hollins (1991), cited in Hollins & Shinkins (2006), p.96

2.3. Discussion of Results relevant to Logistics Training and Education

Development of the service also supported the role of the Trade Association in raising the profile of the industry. The 2015 CBI report had again highlighted the urgency of addressing skills shortages and the need for apprenticeship reform across industries in the UK Clarke 2011 suggest that Trade Associations are of growing importance following fragmentation of trade union and employer organisations (p.106). Clarke compares systems of Vocational Education and Training in different European countries and points out that compared to Germany, France and the Netherlands, the UK has relied on Sector Skills Councils (quasi-governmental bodies) for work on regulation of qualifications. One of the problems for the UK logistics

sector is that the Logistics sector skills council ceased to operate in 2012 and work on logistics vocational education and training was thus fragmented amongst remaining Skills Sector Councils. This has recently been addressed through the formation in 2015 of an employer led Supply Chain and Logistics Trailblazer group to work with the UK Department of Business Innovation and Skills to define standards in the sector (Skills Funding Agency, 2016).

In the academic literature, logistics training and education research features in both general logistics journals and in the field of human resource management. There has been effort to demonstrate organisational benefits of skills development, Gowen and Tallon (2002) using a sample of just over 350 firms found positive correlation between employer training and successful Supply Chain Management practice. Skills requirements in logistics have been given more attention recently, Keller and Ozment (2009) highlight the shift in logistics skills need to address the shift to customer oriented workforces and more recently, Bernon and Mina's (2013) work on executive education supports the need to go beyond competency training to addressing wider managerial development needs. Prajogo and Sohal (2013) again identify the soft skill set (communication and teamwork) as a key competence requirement for SC professionals and also the need for knowledge of technology, especially in relation to supply chain integration. In a recent comprehensive literature review of Human Resource Management issues in SCM, Hohenstein et al. (2014) identify the need for further research in development of "a global mind set" as critical for future training programme development.

Within higher education, research has highlighted challenges in developing the discipline, Lancioni et al. (2001) identified a range of barriers to development of Logistics Higher Education courses in the USA including lack of interest from students and lack of support from the business community. Professionals in both logistics and supply chain management perceive innovation as originating in practice but without engagement, graduate competences may not be adequately addressed as shown in Lutz and Birou's (2013) specialist study of logistics education where they call for closer integration of higher education with Industry to ensure graduates develop industry relevant skills.

Digital courses supporting skills development is of increasing interest, in the UK, significant numbers of accredited courses are delivered on-line. Wu and Huang (2013) address the growth of e learning initiatives.

3. CONCLUSION

The themes presented represent very preliminary work as the project work is not yet complete. Service management theory application has been productive in both providing project structure and in the engagement of business members of the association through the survey and field work but this needs extending through introduction of more fundamental theoretical perspectives on service logic as suggested by Vargo et al (2008). Management research on trade associations has recently featured more prominently in a number of disciplines (business, law and urban studies) and the institutional work of these associations and their impact on

society is under researched. The example case of programme development in logistics training and education demonstrates Esparza et al (2013) claim for trade associations contribution to civic purposes.

It is intended to further extend this preliminary work through first, expanding on Service bundling in Trade Associations and in particular, the use of services in the SME sector where membership of more than one association per year is normal, as is dropping in and out of membership to suit purposes of the SME. Secondly, the importance of new service development to larger members needs consideration, especially how this may help engage these businesses as stakeholders and develop their contribution to trade association activities through analysis of the mutual benefit potential. Finally, the specific challenges of logistics training and education both in the UK and beyond need further elucidation, and a more balanced treatment of the issues of accreditation and qualifications in the sector at all levels will be addressed.

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