STUDENT SATISFACTION AND DISSATISFACTION – A STUDY IN THE HIGHER EDUCATION CONTEXT

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Acknowledgments

This series of works were originally inspired by my husband, Dr Alex Douglas, who has supported me and more importantly believed in me during this process. His advice has been immeasurable. My supervisor, Dr Bob McClelland has been throughout this process a motivating and supporting guide and I could not have finished this without his help. My fellow authors of course have played a great part in this work and have provided experience and expertise over the last decade. Finally my thanks go to my children who have also believed in my efforts and have shown how proud they are of their mother.

Abstract

This application for PhD by publication is the culmination of a series of investigations concerning the development of a conceptual model of student satisfaction with their higher education (HE) experience. The five core papers that sequentially contributed to knowledge are presented within this application, together with their supporting papers. In particular, the investigations focussed on what were the main determinants of student satisfaction utilising critical incident technique (CIT). New determinants of quality within higher education were identified as a result, namely *motivation*, *praise/reward, social inclusion, usefulness, value for money* and *fellow student behaviour*. The resultant research papers have made an original contribution to knowledge in the area of quality in HE.

The rationale for using CIT to gather and analyse data was to investigate its effectiveness in triangulating with existing methods used in HE to measure student satisfaction. The CIT research was triggered by previous research that had developed and tested a student satisfaction questionnaire. CIT is used to gather data that is defined as 'rich'. It is ideal when researching new areas. The questionnaire was based on the work of Sasser *et al* (1978) who proposed that service delivery consisted of a 'bundle' of goods and services, which incorporated distinct elements (the facilitating goods, the sensual service and the psychological service). The CIT survey instrument subsequently adopted, built upon the seminal work by Flanagan (1954) who developed it to assess the psychological impact (on pilots) when learning to fly. Both survey instruments were used to identify the determinants of quality in higher education from a student's point of view and ultimately what was considered "critically critical" (Edvardsson & Nilsson-Wittel, 2004).

An evaluation of teaching quality was carried out as part of this series during the mid-2000 era, and a comparison made of some of the existing measurement methods used at the time, such as student feedback questionnaires and peer review practices. A review of the potential use of mystery students in higher education was also carried out. This particular study highlighted the lack of confidence (by teaching personnel) in the existing methods for evaluating teaching quality as well as some mistrust of the concept of using mystery students in a classroom setting.

A multi-method approach was chosen for this series of studies, because of the merits in using both quantitative and qualitative studies to generate data. Using such an approach provided a sequential method of analysing and presenting the data for this cross-sectional study. The initial student satisfaction questionnaire was a quantitative instrument and gathered data on importance and satisfaction ratings (using a five-point Likert scale) which were further analysed used quadrant analysis.

The CIT survey was largely qualitative in nature and gathered written narratives from students about their positive and negative experiences; the resulting data used interpretive thematic analysis to identify key themes and any resulting patterns that could be coded quantitatively for input into the statistical software package SPSS. Each piece of research was underpinned by the existing literature at the time; this has inevitably progressed since then. CIT has been widely used in the service sector and additional determinants of quality within higher education have been identified within the current literature. A number of papers presented with this application have generated academic discussion in the field and these are evidenced by the number of citations for the applicant's work. Moreover, the applicant's additional supplementary papers also appended for background information have also been cited within the academic literature.

The findings can be applied to teaching practice and within policy documents that support front-line teaching (and other) personnel in higher education.

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1.1 List of Core Papers

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2. **Douglas, Jacqueline** and Alexander Douglas (2006) Evaluating Teaching Quality, Quality in Higher Education, Vol.12, No.1 (ISSN 1353-8322)
3. **Douglas, Jacqueline**, Robert McClelland and John Davies (2008) The Development of a Conceptual Model of Student Satisfaction with their Experience in Higher Education, Quality Assurance in Education, Vol.16, No.1. pp. 19-35. ISSN: 0968-4883
4. **Douglas, Jacqueline**, Robert McClelland, John Davies and Lynn Sudbury (2009) Using critical incident technique (CIT) to capture the voice of the student, The TQM Journal, Vol.21, No.4, pp. 305-318. ISSN 1754-2731 / ISBN 978-1-84855-798-7 (Awarded Emerald Literati Network 2010 Outstanding Paper Award)
5. **Douglas, Jacqueline**, Alexander Douglas, Robert McClelland and John Davies (2014) Understanding student satisfaction and dissatisfaction - an interpretive study in the HE context, Studies in Higher Education. DOI number is 10.1080/03075079.2013.842217 (online 9th January 2014)

   *(previously Jacqueline Blackmore).

Appendix 4 Supporting Papers (Journal Publications and Conference Publications / Presentations):

1.2 List of Supporting Work – Journal Papers

1. **Blackmore, J.** & Douglas, A. (2003a) "Towards a "better" university: the use of the EFQM Model in a UK Higher Education Institution" *The Asian Journal on Quality*, December, 4 (2). ISSN:1598-2688
2. **Blackmore, J.** & Douglas, A. (2004a) The Use of the EFQM Excellence Model in a Higher Education Institute, *Journal of Management Systems*, 16 (3), 11-24, (USA) ISSN: 1041 – 2808
3. **Blackmore, J.A**. (2004) A critical evaluation of academic internal audit, *Quality Assurance in Education*, 12 (3), 128-135, ISSN: 0968-4883

4. **Blackmore, J.A.** (2005) A critical evaluation of peer review via teaching observation within Higher Education, *International Journal of Education Management*, 19 (3), 218-232. ISSN: 0951-354X
5. Douglas, A and **Douglas, J** (2006) Campus Spies? Using mystery students to evaluate university performance, *Educational Research*, 48 (1), 111-119. ISSN: 0013-1881.

1.3 List of Supporting Work – Conference Papers

6. **Blackmore, J.** & Douglas, A. (2003b) Towards a "better" University: the use of the EFQM Model in a UK Higher Education Institution, Proceedings of the *6th Annual Conference on Quality Management and Organisational Development (QMOD)*, Paris, France.
7. Douglas, A. , **Blackmore, J**. and Barnes, B. (2004) Measuring Student Satisfaction at a UK University, Proceedings of the *7th Quality Management and Organisational Development (QMOD) Conference*, Monterrey, Mexico, pp. 97-112. ISBN: 970-773-015-3
8. **Blackmore, J** (2005) The development of a conceptual model of student satisfaction with their experience in higher education, *8th Quality Management and Organisational Development Conference,* Palermo, Italy, pp. 237 - 246.
9. **Douglas, J.**, McClelland, R. and Davies, J. (2006) The development of a conceptual model of student satisfaction with their experience in higher education, *9th ICIT Conference*, (April) Hong Kong.
10. Douglas, A., **Douglas, J.** and Barnes, B. (2006) The Student as Customer? Proceedings of the *9th Toulon – Verona Conference on Excellence in Services*, Paisley, UK, September, pp.291-303. (ISBN 1-903978-33-5)
11. **Douglas, J.**, McClelland, R., Sudbury, L. and Davies, J. (2008) Comparing Critical Incident Technique and Survey Questionnaires as a means of Collecting Student Feedback, Proceedings of the *11th Toulon-Verona Conference on Excellence in Services*, Florence, Italy ISBN 978-88-8453-855-0.

1.4 List of Conference Presentations

1. **Douglas, J.A.** (2008) Comparing Critical Incident Technique and Survey Questionnaires as a means of gathering student feedback in HE, presented at the *Faculty of Business and Law Research Conference*, Liverpool John Moores University, (June) Liverpool, UK.
2. **Blackmore, J.** & Douglas, A. (2004b) Mystery students – Has their time come? Presented at The *Learning and Teaching Conference*, University of Hertfordshire.

Statement of Contribution

This statement confirms that the applicant was the principle investigator and lead author on the co-authored (core) papers included in this submission.

2 Overview and context of the research area

This series of studies, which focused on the measurement of student satisfaction within the higher education context, produced five published journal papers that have contributed to the field. It is therefore a multi-method approach to research (Saunders et al 2007) involving mono methods, multiple methods and ultimately a mixed method approach throughout the period of research. The investigation took place over a period of ten years, starting in 2003. The findings are relevant to the main stakeholders within higher education (students, staff, management, government bodies).

The focus of the selected main papers was firstly to identify those aspects of their higher education experience that where drivers of satisfaction and drivers of dissatisfaction; then to determine which of those drivers where critical, i.e. caused both satisfaction and dissatisfaction. For example, access to teaching staff leads to satisfaction, whereas lack of access leads to dissatisfaction. The term 'critically critical' was defined by Edvardsson and Nilsson-Wittel (2004) as a critical determinant of quality that leads to a change in loyalty behaviour.

The investigations had built upon earlier work by the applicant, which had considered various business models, such as the European Foundation for Quality Management model and how they were being applied within universities in order to drive improvement across the institutions (Blackmore & Douglas, 2003; 2004a). During the same period, the applicant was critically evaluating peer review practises in UK universities, in order to provide a best practice framework for appraising teaching performance (Blackmore, 2005a). This led on to, the series of interconnected studies that form the five central papers in this application for a PhD**Error! Bookmark not defined.** by publication.

The cohesive aim of this series of investigations was to develop a conceptual model of student satisfaction with their higher education experience. This aim was achieved by addressing the following research questions:

i. What factors determine student satisfaction / dissatisfaction? I.e. what are the drivers of student satisfaction and dissatisfaction?
ii. Which determinants are critical? I.e. which are most likely to have either a positive or negative impact on student loyalty behaviours?
iii. What was the most valid and reliable method of soliciting student feedback in order to direct decisions taken by university management?

2.1 Quality

Quality has been variously defined by Juran and Gryna (1988); Crosby (1979) and Parasuraman *et al*, (1985). However, there was one feature of all definitions that can be concisely held and that is that the customer is the focus of any mention of the word quality.

Reeves and Bednar (1994) argued that the meaning of the dependent variable (quality) continually changes and have resulted in various models of assessing quality based on evaluating expectations against performance (Parasuraman *et al*, 1985; Zeithaml *et al* 1993) or by evaluating performance only (Cronin and Taylor, 1992). The two schools of thought have gained widespread acceptance. However, Crosby (1996) believed that the way to delight customers is establish what their needs were and then to create the requirements necessary to meet those needs.

2.2 A Concise History of Quality Management

Quality Management has developed over the last ninety years as a modern branch of Management Science. Dale (1999) viewed the evolution of quality management as moving from Inspection to Quality Control to Quality Assurance and then to Total Quality Management. Although Lean Six Sigma has now emerged as a continuous process improvement methodology that focusses on eliminating waste (non-value added activities) in order to speed up processes whilst systematically reducing defects. The shift has moved away from inspection after the event to making the customer the centre of everything that we do.

The strategic importance of quality and its management is now universally accepted. How organisations manage their quality however varies greatly industry to industry. The service sector is deal with in the next section.

2.2.1 Quality Management in Services

Lessons were learned from the management of quality in manufacturing and were important within what is now a service-dominated economy. Where customer demands for excellent products grew exponentially, they also started to increase in a similar manner for service quality.

There is an abundance of variety in how service quality is defined and measured. The plethora of literature on quality management in services, including that by Parasuraman, et al (1985) identified ten determinants of quality that a customer measured the service by. Garvin (1988) identified five different approaches to quality, which included value-based, i.e. satisfaction being relative to price. He also recognised that quality would be translated differently depending on the industry. Bedi (2006) identified eight dimensions.

More recently, there has been a move towards developing models for understanding and measuring how customers view the quality of service they receive (Gronroos, 1988; Haywood-Farmer, 1988 and Parasuraman *et al*, 1985).

2.2.2 Measurement of Quality

Service quality can be measured by comparing the customer's perceptions of the service received with their initial expectations. Quality perceptions are derived from the service process as well as from service outcome. The way the service is performed can be a crucial component of the service from the customer's viewpoint. High quality equates with meeting (or exceeding) customer expectations

2.3 Higher Education Context

2.3.1 Historical Context

The applicant's research began at a time that followed the special interest by universities in the United Kingdom (UK) in performance measurement and the government plans for top-up fees in 2003/2004. Central Government granted the *Liverpool Polytechnic* degree-awarding power via the Education Reform Act of 1988 making it responsible for the quality of its higher education provision. The Act 'freed' polytechnics from Local Government control allowing them to be governed by a Board of Governors (Education Reform Act 1988). By 1992, the *Liverpool Polytechnic* became a Higher Education University (HEI) and later re-named *Liverpool*

John Moores University (LJMU). The HEI was scrutinised by the Higher Education Funding Council for England (HEFCE), responsible for assessing the quality of HE provision since 1992. In an evaluation of academic internal audit (Blackmore, 2004) found that it had cost Higher Education Institutions in the UK an estimated £45-50 million per year for HEFCE to have 2,500 reviews of over 60 subjects conducted. This burden of cost caused an outcry within the sector and a revised method of assuring quality was introduced that placed the burden of quality assurance onto the institutions themselves. They were required to self-review and to publish annual reports on their performance that were then made available to stakeholders. Towards the end of the 20th Century (1997) the Quality Assurance Agency (QAA) was formed to act on behalf HEFCE to ensure that teaching and learning standards were being maintained (QAA, 2000). The development of subject benchmarks also took place to ensure that the right subjects were being taught. So there was a plethora of activity concerned with quality assurance. There followed an era of checking whether peer review schemes were in place and if so, had the scheme led to an improvement in teaching practice. So whilst the HE sector could argue it was doing the right things in the right manner, the fundamental question for stakeholders was "*Is the student learning*?" Included in Deming's teaching is that conducting annual performance appraisals on people was a damaging, as opposed to an improving, process. At the British Deming Forum (Clark, 2002, page 946) a new educational philosophy was described by Myron Tribus (quality counsellor). He said that the pleasure and joy of learning was born out of quality but that joy is a dependent variable so the tutor must be alert. Creating an independent learner is what makes a quality experience and it was the role of the tutor to work on the system of teaching to continuously improve it (Tribus, 1992).

Dialogue between academic practitioners and managers during academic review events in the late 1990s, early 2000s, included the value-added remit of higher education, whilst at the same time, being mindful of the widening participation agenda that was also the aim of some Higher Education Institutions (HEIs). LJMU was one such university focussing on continuous improvement and the sharing of best practice.

The initial introduction of fees in 1998 followed the Government commissioned Dearing report of 1997 into the funding of higher education in the UK. In 1997, when the Dearing report was published, students were told they would need to repay 25% of fees; the grant scheme was abolished. Fees rose to £3,000 in 2004 then £9,000 for a full time degree course, thus making the sector even more competitive and the students increasingly demanding about what they are paying for. (The Guardian, 2004) (http://www.theguardian.com/education/2004/jan/27/tuitionfees.students, 2004). Tuesday 27 January 2004. The question of value for money was starting to emerge in this sector. The education sector was for the first time, having to deal with similar challenges being faced by public sector and private sector organisations across the globe in terms of identifying their 'customers' and their needs and wants. However, they also faced the dilemma that comes from the tension between holding on to academic freedom and the strict requirements of the overseeing bodies, such as the QAA. Moreover, many academicians and administrators battled with the concept of the student as customer and the type of relationship they had with this customer. The Dearing Report made recommendations on how HEIs within the UK were to be managed, that seemed to be based on business sector management ideologies and drives for more efficiency (Dearlove, 2002); thus adding to the debates concerning the relationship between staff and students. These debates have not gone away but have generated ongoing discourse about the relationship between the numerous internal and external stakeholders. In 2004, the HE Academy was formed to focus on the development of the teaching profession (Blackmore (2005). The challenge was (and still is) about ensuring the delivery of high quality services and developing robust methods of evaluating that delivery. Therefore, the research undertaken over the last decade by the applicant was initially to explore these complex relationships in an endeavour to understand how the quality of teaching in higher education was measured (Blackmore & Douglas, 2004b) (Blackmore , et al., 2004) and latterly to introduce and test a conceptual model of student sat/dissatisfaction with their higher education experience (Douglas, et al., 2008) (Douglas, et al., 2009) (Douglas, et al., 2014).

Students and staff are just two types of stakeholders identified within higher education. Each has their own perceptions of quality and how it is defined (Blackmore, 2005; Tam, 2001). Cullen (2003) argued for an 'equal expression of legitimate voices' but it is unarguably the customer's needs that should drive service quality, otherwise the organisation will ultimately fail. It must be assumed that a student's primary need when they decide to enrol on an undergraduate course of study is to learn. Therefore the focus of measuring student satisfaction should be on whether their learning is being facilitated effectively; a seemingly difficult concept to measure. Particularly given that the other legitimate voice in this situation is the individual lecturer or tutor who decides the best way that the student will learn their particular subject.

This commentary aims to critically review how the series of studies aimed at delivering the objectives detailed above link together to add to the existing body of knowledge on student satisfaction in higher education. Furthermore it will provide a critical review of the five main papers in in the series. The other papers will be referred to as background information and are also appended to this proposed summary.

The following chapters will present the lines of enquiry for the five cohesive published works and a critical evaluation. The specific quality stance will be explored in context with the influential seminal works available within the extant literature.

3 Published work submitted and the PhDError! Bookmark not defined. award

LJMU regulations for the award of PhD by Published Work require candidates to demonstrate a substantial, original and independent contribution to knowledge by their published work. The published work must form a coherent body and be related to a common theme. It should be comparable to a PhD thesis. This section details how the submission meets each of these elements.

3.1 Contribution to knowledge

3.1.1 Substantial

The research took place using two universities as the facilitating bodies for this study; Liverpool John Moores University (LJMU) and the University of Salford. Funding was provided by LJMU for some elements of this research and agreement sought from the Salford Business School to approach their students. The research brings out the various quandaries involved in combining the academic freedom of educational institutions and the requirements of their governing bodies. A review of the existing literature was conducted in order to gauge best and worst practices in the field of education, as well as undertaking a various studies to collect data first hand. This has led to over 25 peer-reviewed publications spanning from 2003 to 2014 on quality-related topics mainly, but not solely, in the area of higher education.

There was considerable interest in gathering data on the student experience both within the university and the wider academic community. In fact, monitoring and measuring has become a part of everyday academic life for the higher education (HE) tutor. At the time of the initial research into measuring student feedback, LJMU**Error! Bookmark not defined.** had removed the 'importance' factor ratings from its questionnaires and had focused on measuring satisfaction levels only. It was believed by the applicant and her fellow researchers that vital data was missing from the information provided to schools on which areas to focus resources. Hence the development of a reliable and valid survey instrument (Paper number 1). In parallel to this research concerning student satisfaction, a project on evaluating teaching quality had highlighted how teaching personnel and managers felt about the various processes in place. Latterly, it was the richer data that was generating interest and that was also limited using existing university measures to gather satisfaction measures from the student body. The rich data referred to here, generated seven new student-perceived determinants of quality in higher education, which were termed by the applicant as: (i) motivation; (ii) praise/reward; (iii) social inclusion; (iv) usefulness; (v) value for money; (vi) achievement and; (vii) fellow student behaviour. Table 1. Redefined Student – perceived determinants of Quality in Higher Education "(page 26) provides the detailed definitions of each new variable. The various published works have generated an interest from the wider academic community and has been instrumental in triggering further research in a number of other countries on the measuring of student satisfaction and the identification of the determinants of satisfaction.

3.1.2 Original

Whilst measuring what is important, *per se*, is not new, using the service-product bundle to design a questionnaire in higher education was. Since its publication in 2006, a number of other research studies have used the questionnaire. Similarly, the critical incident technique had not been used to measure student satisfaction in higher education as a way of theming the data according to the determinants of quality, it does now however; seem to be an emerging area. Since publication in 2008 with paper number three, there have been at least 84 citations within the academic literature.

Invitations to contribute to practitioner publications and to two text books on managing quality are currently being acted upon. Since the candidate's first publication in 2003, she has been invited to review for a number of highly rated international journals. She has also been invited as a guest lecturer at one university and has been asked to lead on a study on disruption in the classroom. She is currently part of the organizing conference committee for the next international quality-focussed conference to run at LJMU in August 2014.

The critical review of the five core papers, listed in 1.3 above, will be detailed within the following section in terms of the ontological debate on epistemological philosophy; the methodological approaches used and the type of study embarked upon. This section will outline the particular quality stance that was adopted and each paper will be considered in turn to show how this series of investigations have contributed to the growing body of quality knowledge generally and education knowledge specifically.

Table 1 below lists all papers and refers to the data relating to each of the published works. The papers referred to as part of this summary are submitted as separate files (5 core papers; 4

other refereed journal papers; and 9 conference papers). In total, there have been 29 publications by the applicant; several of which have been cited by other researchers.

Table 1. Core published works and supporting papers.

Published Works No.	Author(s); Year of publication; Title; Journal details. (Appendix 3)	Impact	Applicant's supporting papers (Appendix 4) C=conference papers (n=9) J= Journal publication (n=4)	Research Questions
1	Douglas, J., Douglas, A. & Barnes, B., 2006. Measuring Student Satisfaction at a UK University. *Quality Assurance in Education,* 14(3), pp. 251-267.	8,782 downloads (September 2013) 121 citations	(c) Douglas, A., Blackmore, J. and Barnes, B. (2004a) (c) Douglas, A., Blackmore, J. and Barnes, B. (2004b) (J) Blackmore, J. and Douglas, A. (2003) (c) Blackmore, J. and Douglas, A. (2003)	I page 8
2	Douglas, J. & Douglas, A., 2006. Evaluating Teaching Quality. *Quality in Higher Education,* April, 12(1), pp. 3-13.	41 citations	(J) Blackmore, J.A. (2004) [cited in 15 publications].; (c) Blackmore, J. and Douglas, A. (2004); (J) Blackmore, J.A. (2005) [cited in 30 publications]; (c) Blackmore, J. (2005); (J) Douglas, A. & Douglas, J. (2006) [cited in 15 publications].	Iii page 8
3	Douglas, J., McClelland, R. & Davies, J., 2008. The development of a conceptual model of student satisfaction with their experience in higher education. *Quality Assurance in Education,* 16(1), pp. 99-35.	84 citations	(c) Douglas, A., Douglas, J. & Barnes, B. (2006)	i, iii page 8
4	Douglas, Jacqueline, Robert McClelland, John Davies and Lynn Sudbury (2009) Using critical incident technique (CIT) to capture the voice of the student, The TQM Journal, Vol.21, No.4, pp. 305-318. ISSN 1754-2731 / ISBN 978-1-84855-798-7	Outstanding Paper Award 2010 1 citation	(c) Douglas, J.A. (2008)	Iii page 8
5	Douglas, J.A., Douglas, A. McClelland, R.J. & Davies, J., 2014. Understanding student satisfaction and dissatisfaction: an interpretive study in the UK higher education context. *Studies in Higher Education*, published online 14/01/2014	Research Gate requests for this paper since 2013	(c) Douglas, J.,McClelland, R., Sudbury, L. (2008)	i, ii, iii page 8

The five core papers investigated the area of service quality, student satisfaction and loyalty within higher education. Using the service product bundle to design a quantitative questionnaire was new for the HE environment, as was using CIT to measure student satisfaction. A number of new determinants of quality were identified out of the CIT research, which contribute to knowledge and will help teaching practitioners and HE managers to focus their efforts on the development of improvement strategies. The second paper considered the introduction of mystery students, a concept that was new to HE and evaluated the current practice of peer observation in the classroom and student questionnaires.

3.2 Paper 1

Douglas, J., Douglas, A. & Barnes, B., 2006. Measuring Student Satisfaction at a UK University. Quality Assurance in Education, 14(3), pp. 251-267.

Refereed, Principle author

3.2.1 Overview and contribution

This study was a joint collaboration between the applicant, her subject group leader and a fellow lecturer. The resulting quantitative data collection method built upon an existing theoretical model that had been applied to quality measurement in private sector service organisations; this was the service product bundle (Sasser, et al., 1978) and was therefore initially deductive in nature (Johnson & Christensen, 2004). The paper had two main emphases; firstly, whether or not the private sector model could be adapted and adopted for a higher education context and secondly, to critically evaluate previous satisfaction surveys, where <u>satisfaction</u> was measured but <u>importance</u> was excluded. The argument for developing an alternative survey instrument was based on the researchers' belief that where satisfaction was measured without the importance measurement, the results could not be as useful. This would seem to have been the right call, as university questionnaires now include an importance rating.

The preliminary results were presented by the three researchers at a Faculty teaching and learning conference (Douglas, et al., 2004a). The applicant also introduced the concept of Flanagan's (1954) CIT when outlining the methodological approach used and explained how critical incident technique could be used to differentiate causes of satisfaction and dissatisfaction via student anecdotes of good and bad service provision. At that time, none of the researchers had been trained in its use. The research was then taken to an international quality conference and presented by the applicant (Blackmore , et al., 2004). It took two years before being published by the *Quality Assurance in Education* journal. The new questionnaire (appended) was developed for the higher education sector based upon a rating of both elements (satisfaction and importance). The questionnaire adopted and adapted the service-product bundle method, which at that time was concerned with three elements namely, (i) the facilitating (physical) goods, for example, the lecture room (ii) the explicit service, that is, the teaching and learning and (iii) the implicit service, for example, friendliness of teaching staff. It should be noted that this theoretical model has since been extended by Fitzsimmons and Fitzsimmons (2006) to include five distinct elements. However, at the time of the study, the university service was interpreted under the three initial headings (outlined above) and specific questions were developed to gauge levels of satisfaction and importance in each of the areas. For example, how satisfied (on a scale of 1-5) were the students about the *friendliness* of teaching staff and how important (on a scale of 1-5) is the friendliness of teaching staff. This double rating allowed the use of quadrant analysis to make sense of the data and allowed data to be categorised as belonging to one of four quadrants in a two by two matrix, i.e. high satisfaction – high importance; high satisfaction – low importance; low satisfaction – high importance; and low satisfaction – low importance. Such categorisation would allow university managers to focus on those areas of their service rated low for satisfaction but deemed of high importance by students; thus leading to improvements in overall student satisfaction. The questionnaire was relatively easy to administer and has since been requested by a number of other researchers for use in their own studies. The results allowed for the identification of aspects across the service-product bundle that were of high importance but rated low on satisfactory. However, the breakdown within each of the three service product bundle categories did not produce sufficient detail to allow for focussed improvements. The data produced was not ‘rich’ enough to allow for meaningful data on what was behind a rating for example, staff friendliness’. It became obvious that a more qualitative data collection instrument was required, or the quantitative results would need to be supported by the use of focus groups (or similar) to give the necessary rich data. This eventually lead to the various critical incident technique studies (Douglas, et al., 2009) and (Douglas, et al., 2014) that built on the development of the conceptual model of student satisfaction with their experience in higher education (Blackmore, 2005) and resulted in a number of publications by the applicant (Douglas, *et al*., 2008; 2009; 2014). Establishing the needs of the student is extremely difficult for teachers and managers, particularly as their needs seem to change year on year. Because of the homogeneity of the students, needs also vary widely according to each individual student.

3.3 Paper 2

Douglas, J. & Douglas, A., 2006. Evaluating Teaching Quality. Quality in Higher Education, April, 12(1), pp. 3-13.

Refereed, Principle Author

3.3.1 Overview and contribution

This inductive, qualitative study used case analysis combined with action research. Both the applicant and the secondary author were practitioners within the field of quality and both teachers of undergraduate business-related studies. The primary researcher was relatively new to teaching in higher education but had been employed in a quality assurance capacity by LJMU. Interpretivism influenced this approach to the relationship between the existing theory and the researcher's own experience in education was used to aid the understanding of the consumerism phenomenon being applied within higher education in the UK. This summary will discuss the epistemological philosophy behind this approach using the examination of the various stances taken by quantitative and qualitative researchers (Bryman & Bell, 2007). (pp 415).

During the late 1980s, consumerism had been defined within the public sector –related literature as attempting to redress the imbalance of power between goods and services providers and their users (Potter, 1988). Wright and Ngan (2004) offered their view that public services were necessary within a democratic society, and needed to ensure that they were innovative and progressive enough in terms of ensuring they had a philosophy of continuous improvement. The debate within higher education (HE) at the time was, inter alia, focussed on accountability and how to assure stakeholders regarding the quality of their higher education service provision.

The higher education sector had already identified the need for collecting data on the quality of all aspects of their service provision so they could provide assurances. A number of methods were already in operation at that time such as end of year module questionnaires; end of programme feedback questionnaires; and review panels of existing programmes of study using input from student representatives. Other methods included the use of peer observation to observe and comment on each other's practice by acting as a 'critical friend'. Previously teaching observation had been undertaken by an external examiner from another institution. Some institutions had piloted the use of mystery customers to monitor support services such as catering and administration services. This heralded the beginning of a shift away from heavy external scrutiny from government bodies to a lighter touch where institutions took more control on the monitoring of all aspects of quality. However, many of the methods employed by institutions were not universally accepted by academic staff; they were critical of the validity and reliability of much of the data collected.

This first study considered a number of seminal works and best practice guidelines to evaluate whether a triangulation of peer observation, student surveys and mystery students would produce more valid and reliable data that would alleviate many of the fears and criticisms proffered by academics of the previous methods. This built upon previous work by the applicant on the idea of mystery students (Douglas & Douglas, 2006). The discussion on the concept of mystery students had been led by the applicant and her co-author at a teaching and learning conference in Hertfordshire in 2004. The 45-minute discussion was attended by academic practitioners and QAA administrators and generating interesting debate (Blackmore & Douglas, 2004b).

This proposed summary will consider whether such triangulation was appropriate in light of what was going on at that time and how it lead to further research on student satisfaction and data collection methods, such as using CIT to gather narratives from students on their positive and / or negative experiences (Douglas *et al* 2008) and the identification of the determinants of quality within higher education (Blackmore, 2005). This paper has since been viewed on-line 221 times and cited in 41 other journal publications, thereby generating discussion on the issues raised.

3.4 Paper 3

Douglas, J., McClelland, R. and Davies, J. (2008) The Development of a Conceptual Model of Student Satisfaction with the Experience in Higher Education, Quality Assurance in Education, 16(1) pp. 19-35

Refereed, Principle author

3.4.1 Overview and contribution

This study was a joint collaboration with two other researchers in the field of quality in education, one of whom worked for a different UK-based business school. Unlike paper number 2, this was based around an interpretivist philosophy using an inductive approach, which based on the desire to delve deeper into those aspects of a university service that satisfied and / or dissatisfied students. A qualitative data collection instrument was utilised, namely Flanagan's (1954) 'critical incident technique'. The critical incident technique was being used by other quality-focussed researchers within service industries but it had not been used as a means of gathering data on student satisfaction. The underpinning theory is the relationship between service quality, customer satisfaction and customer loyalty. The weight of evidence from the extant literature is that service quality is a precursor of satisfaction and that satisfaction leads to loyalty – a linear relationship. The aim of this research was to identify those aspects of service quality (drivers) that lead to customer satisfaction and hence loyalty and those aspects of service quality (drivers) that lead to dissatisfaction and hence disloyalty. Research by Edvardsson and Nilsson-Wittell (2004) had used CIT to gather details about incidents that were 'critically critical', in other words incidents that lead to a change in behaviour by the consumer. Therefore this study asked whether the incidents referred to within education had or would have led to a change in their loyalty behaviour, i.e. a change in course, intention to enrol for further study, or recommending the university to another person. Building on earlier work by Johnston and Silvestro (1990) it was decided to use the ten service quality determinants identified by Parasuraman *et al* (1985) as a means of coding the anecdotal data collected via the CIT data collection instrument. The survey instrument also asked the students to comment on how the remembered incident had made them feel. This summary will show how the determinants of quality identified out of the research were defined and which determinants were deemed to be critically critical. This summary will evaluate why this study lead to a larger mixed methods study using two university business schools and a comparison of CIT with the more traditional quantitative data collection instruments.

The impact of this research can be seen in various ways, including the number of publications that have cited this research (n = 84).

3.5 Paper 4

Douglas, J., McClelland, R., Davies, J. & Sudbury, L., 2009. Using critical incident technique (CIT**Error! Bookmark not defined.**) to capture the voice of the student. The TQM Journal, 21:4, pp. 305-318.
Awarded Emerald Literati Network 2010 Outstanding Paper Award.

Refereed, Principle author

3.5.1 Overview and contribution

This post positivist approach used a deductive approach to compare two very different methods of collecting data to discover whether they could be combined in some way within higher education. This could be viewed as a somewhat bold attempt to introduce yet another type of survey instrument into an already over-burdened sector. Phrases such as 'questionnaire-fatigue' were being used within the higher education arena, where the measurement of performance is part of academic life. However, a comparison was nevertheless made of two data collection instruments in terms of their appropriateness in collecting student satisfaction data. The principle researcher appeared to favour CIT as it was a novel way of gathering student feedback to produce 'interesting' narratives on actual incidents, as opposed to a tick-box exercise, which would result in scores only. The two survey instruments (standardised traditional tick-box self-completion student satisfaction questionnaire and critical incident technique survey instrument designed to gather anecdotal evidence on the student experience) where compared in terms of various factors, with a view to evaluating whether CIT could augment what is already used in higher education. This deductive but qualitative desk top analysis of the existing methods is what lead to the culminating research about to be published (Paper number 5). This summary will provide a critical evaluation of whether combining both methods to gather student feedback was more valid and reliable and whether the data would be useful for academics in higher education.

3.6 Paper 5

Douglas, J. A., Douglas, A., McClelland, R. J. & Davies, J., 2014. Understanding student satisfaction and dissatisfaction - an interpretive study. *Studies in Higher Education*. Published on-line January 2014.

Refereed, Principle author

3.6.1 Overview and contribution

This final and most current investigation in this series aimed to test the critical incident technique (CIT**Error! Bookmark not defined.**) survey on a larger scale. This was an inductive approach using grounded theory to generate new hypotheses from the anecdotes collected. The view was that student behaviour is dynamic and dependent on the situation regarding how much they pay for their higher education experience. This meant using a bigger student sample (350 students), two universities (for comparison purposes) and two types of student (level 4 and level 6), which equates to first year and final year students respectively. In terms of originality, this type of study had not been undertaken anywhere else and was therefore generating new and significant information for practitioners in the field of higher education. In particular, this study showed that some determinants of quality, such as 'communication', were obviously critical to the service quality, customer satisfaction and loyalty relationship. However, there were also some new critical determinants of quality that apply to higher education specifically arising out of the research. The new determinants of quality identified are indicative of the rising demands of what students perceive as their requirements whilst in higher education.

The two universities allowed their business schools to be surveyed. This involved the cooperation of a number of academics (Module Leaders) and their academic managers (Subject

Group Leaders) to get round the logistical operations of such an exercise. It was felt that by using the core lecture slots to explain the purpose of the survey and capture the data would help in securing the highest number of returns possible. This approach seems to have been successful as 915 narratives were collected.

Capturing the ‘voice’ of the student and translating their narratives into the critical determinants of quality for a higher education student was the main goal. This summary will show how the adapted critical incident technique survey instrument was appropriate in collecting data from students. It will discuss the design, administration and analysis of the CIT data from over the respondents and how the three trained CIT researchers were deployed to do this.

The results concerning the respondent-mix of 1st year and final year students will be critically evaluated terms of how each business school compared and the implications for the future. It will discuss how this series of papers has triggered academic debate and continues to add to the academic literature. Because of the nature of the students used, i.e. enrolled on business-related courses, it was not meant to show that the determinants of quality would be the same for all HE subjects. However, the methodology itself, i.e. CIT can certainly be transferred to other areas.

The study used an appropriate range of sources and cited significant works within the CIT field, for example, the seminal work of Flanagan (1952) and the more recent studies into service quality by (Bitner, et al., 1990); (Bitner, et al., 1994) and (Gremler, 2004). Given that this series of studies was focussed on the provision of higher education, other academic and / or government studies, such as (Dean, 2011) and reference is made to the white paper on students (Department for Business, Innovation and Skills, 2011) and to the Higher Education Funding Council for England (HEFCE, 2012) in addition to building on the earlier work by the applicant, such as Douglas *et al* (2008) and (2009).

The difficulty was in drawing the line on how many narratives needed to be collected on a specific theme (for example, *comfort*, which had two counts of dissatisfaction in this study). Johnston (1995) in his research in the banking sector concluded that some levels of dissatisfaction or satisfaction, whilst seemingly small in frequency, might well be significant if they affect the retention or capture of customers. Therefore it makes sense to further investigation a determinant of quality in education if a student indicated that their experience might impact on their future loyalty intentions. However, this is an arbitrary area for organisations and would depend on available resources, as well as their will to look deeper into what might well be a ‘one-off’ comment.

In a similar vein, the number of words contained in a narrative and whether it equates to ‘rich’ data was a subjective decision. Using three trained CIT judges was vital for the analysis and coding process and ensured that the issues concerning reliability, validity and generalizability of data were covered.

The limitations of mixing methods of research and in particular the translation of qualitative data into quantitative data were explored. However, the belief by qualitative researchers that words can paint a much better picture than numbers alone meant that theming the narratives was required to identify patterns in the anecdotal data. This took a great deal of effort and time for the judges.

4 Methodological observations and treatment of published works

4.1 Introduction

Methodology as defined by Dew (2007) is the underlying principles for particular research approaches. In the discourse provided by Welman et al (2009) it was established that scientific research should follow strict guidelines regardless of the subject area. Methodological issues are not always explicitly referred to within journal papers. However, consideration of the issues and their importance should be understood by social researchers (Dew, 2007) in order to be aware of assumptions or theory being drawn upon and what is likely to result from the methods employed. The methods section of a research paper should explain the what, the how and the why research was carried out and how the analysis was performed. Kallet (2004) termed it the 'anatomy of a research paper' and advised that sufficient information be provided in this section, so that others could reproduce the study. In summarising his guidance, Kallet (2004) suggested that the methods section was the most important part of a research paper because it provided the information by which to judge the validity of the research. This section aims to adhere to that guidance in describing the applicant's investigations.

Methodology is concerned with the influencing factors on the researcher's own position when embarking on an investigation and the epistemological position adopted. On a spectrum that includes a number of philosophical approaches, Saunders et al (2007) identified a Positivist (inductive) paradigm at one end and an Interpretivist (deductive) paradigm at the other. Johnson and Christensen (2004) detailed the characteristics of the three research approaches as quantitative, qualitative and mixed. The overarching methodological approach used in the various published works that comprises this submission encompassed two paradigms within the spectrum and ultimately combined the two. The overarching data collection technique used was multi-method, defined as the:

> "use of more than one data collection technique and corresponding analysis procedure or procedures" (Saunders et al 2007, page 603).

The theoretical underpinning for each piece of research undertaken for this series of studies and the resulting publications built upon an existing appropriate base of theory. At times this was a mixed research approach, using both qualitative (inductive approach) and quantitative data collection and analysis (deductive approach). For some elements of this study, it was appropriate to use a mono approach, i.e. either an inductive or a pure quantitative (deductive) approach. This section will summarise how a multi-model research approach was used, its advantages and its disadvantages. It will evaluate how the reliability of the data was assured and how any bias was managed, particularly in terms of the qualitative data collected. This summary will explore why using two universities to survey students provided confidence in the data collected and why using three judges quality-assured the subsequent analysis process, i.e. validity and reliability.

The approach for this research was to draw from both qualitative and quantitative data. A modified objectivist epistemology and a modified experimental methodology were applied to this series of studies.

Within the extant literature on using CIT, a leading proponent of its use in services research proposed that judges should receive training in the methodology (Gremler, 2004). All three judges received training by him as part of the lead in to conducting the research.

The methodological approach has evolved over time with the maturity of the research projects. It began with a positivist quantitative (deductive) approach and then to an interpretivist qualitative (inductive) approach. Ultimately it became a mixed methods approach combining the two. One paper compared the two approaches.

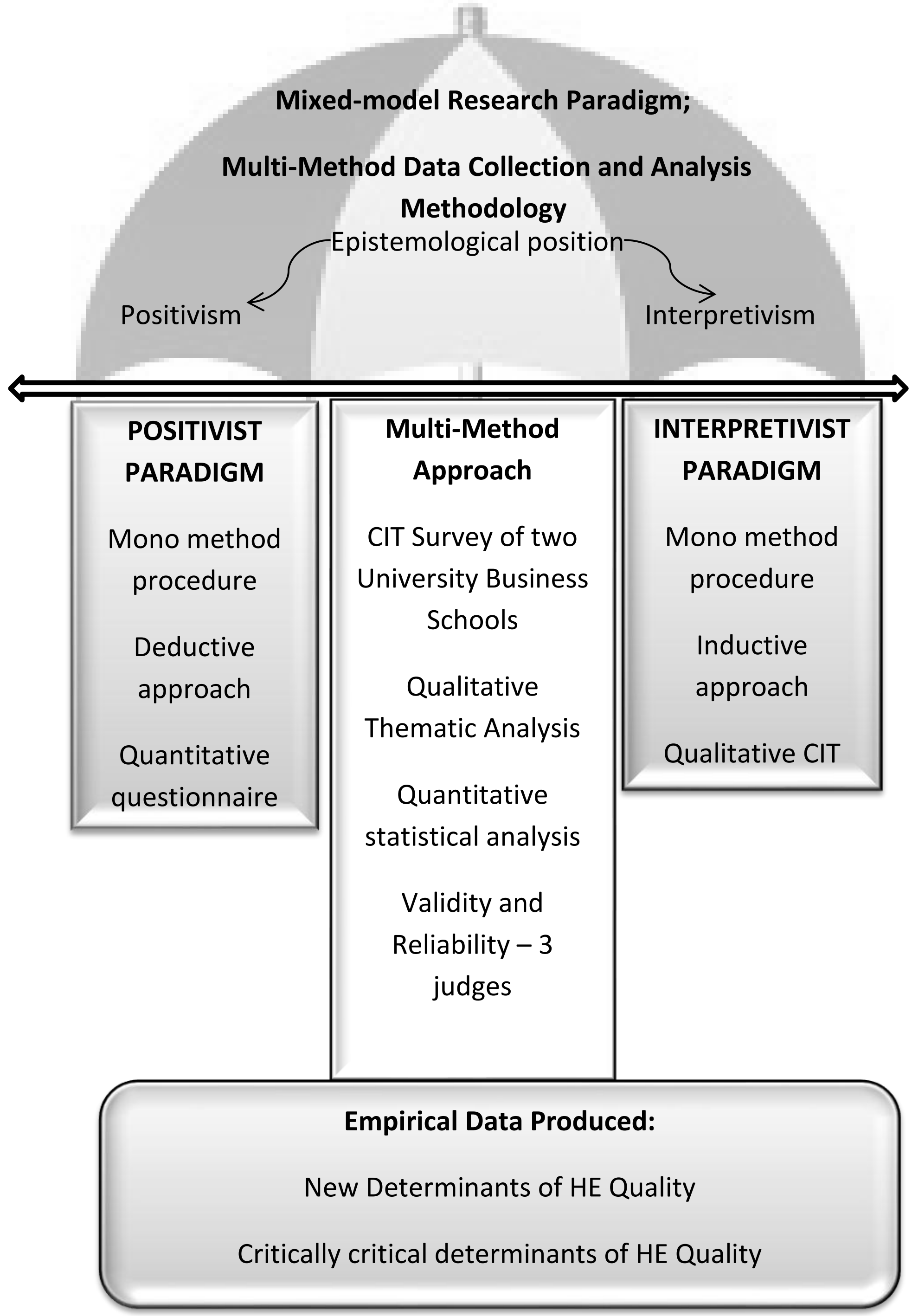
In order to satisfy the criteria for peer-reviewed journal publication, each study had to be well designed with appropriate scientific methods employed. New information resulting from the investigations had to be presented together with an address of the underpinning literature in order to show understanding of the field.

4.2 Philosophical Stance

The development of knowledge, together with the passing on of such knowledge, is clearly the primary role of the higher education lecturer (learning and teaching). Research-informed teaching is recognised within higher education as a method of doing this. It is a continuous process, rather like quality improvement. It is a journey that is embarked upon and although results usually yield from a study, they often provide the impetus for further research and so it continues. Saunders et al (2007) confirmed that the development of knowledge comes from embarking on research. Understanding the whole concept of student satisfaction is one of the many tasks encountered by the practicing academic, whether sub-consciously in trying to do a good job, or deliberately in improving their own teaching quality. The research strategy and methods chosen was underpinned by these assumptions. Traditionally, a description of 'materials and methods' would mean that the materials in this study were the students and universities examined; the methods refer to how the materials were manipulated to answer the questions, how measurements were taken, how they were calculated and how the resulting data was analysed (Kallet, 2004). Because the applicant was in a position to measure student satisfaction, whilst engaged as a practising lecturer, it meant that she was very close to the respondent type (i.e. the student) and as such was affected by her existing knowledge of what makes a student satisfied or dissatisfied. She also felt that 'stories' would tell a more interesting tale of what the student was experiencing. It was these in-built assumptions that lead to the use of critical incident technique to gather actual statements from the respondents without them being wholly ‘lead’ by rigid questionnaires. This fits with an interpretivist epistemology (Saunders et al 2007) that people are social actors and that they play a role that can be interpreted by others (phenomenology). It also fits neatly with the findings of (Liamputtong, 2009)that ‘words are more powerful than numbers’ (p 284). However, a positivist stance was adopted for some of the research, such as using the more traditional survey instrument to measure student satisfaction initially. It is this method which has proven popular within the literature since then, possible because of its ease of use. Quantitative analysis was also used as part of the CIT research to measure the frequency of the narratives and to establish whether there was a relationship between the variables, for example between the critical determinants and the loyalty intentions.

Throughout the series of investigations, respondents were informed of what the study was attempting to do, how the data would be used and why it was important to gather such information. For the most part, the majority of students were agreeable to participating. Where this was not the case, they could refuse to take part with impunity. Permission from Salford Business School was sought and gained so that access to their students was possible. The process of using three CIT-trained people to act as the independent judges was to ensure that any bias or preconceived ideas of the researcher was counter-balanced. This fits with Welman, et al (2009) when in providing guidance on the expansion of scientific knowledge, demonstrated the notion of selective observation, whereby people have a tendency to make the situation fit according to their own beliefs. Therefore, systematic observation methods are used to ensure that information is not ignored. How the data was collected was in a controlled modus, for instance, within Liverpool Business School, the accepted protocol was to utilise the large core classes to survey students as a method of convenience sampling. This was the best method by which to illicit the greatest response in the minimum time. The same method was then used in Salford Business School when testing the CIT survey instrument. The applicant used the same colleagues to assist in this process to ensure continuity, consistency and as a check that the methods were reliable. Figure 1 below conceptualises the overall methodological approach that seems to have emerged out of the five core papers.

Figure 1. Research Methodological Conceptualisation



Welman et al (2009) postulated that the scientific community should be privy to the results of research so that they can inspect the findings and make any critical evaluations. Each component part of this research study has been presented at an international conference or at learning and teaching conferences and has subsequently been published in a renowned international peer reviewed journal. The work has been adopted and adapted by several researchers and comparisons made with the applicant's work. See Table 1, page 13.

Combining research approaches was advantageous. It allowed much more flexibility and a more phased approach for this long-term study of the phenomena. An understanding of events grew out of using both inductive and deductive research approaches. The applicant was part of the research process, as well as her professional practice being affected by what was being researched. This summary will discuss the applicant's own position and changing views both as (former) quality officer and (latterly) senior lecturer in undertaking this series of investigations.

5 Critical reflection and overview

The author evaluated the area of higher education quality and the measurement of student satisfaction over a period of ten years. A number of new determinants of quality in education were identified out of this research. The earlier work by the applicant which produced paper number 1 (Douglas, et al., 2006) found that students considered teaching and learning to be more important than the support services aspects when evaluating the service. The final paper number 5 (Douglas, et al., 2014) found that "communication" and "attentiveness" each produced the most counts in the narratives (n=224 and 211 respectively), with "access" coming next (n=129). Each of these determinants of quality generated positive (satisfied) and negative (dissatisfied) anecdotes and were therefore categorised as 'critical'. The research also found that a number of determinants also influenced loyalty intentions and were classified as 'critically critical'.

During the decade in which the research took place there has been a great period of change, not least of all with the introduction and rapid increase in student fees, coupled with long periods of global recession. The two phenomena have meant that student demands for quality have increased. Moreover, the relationship between lecturer and student has also changed with the balance of power shifting somewhat towards the student and what they want. The typical methodologies traditionally used to collect student feedback are being run in tandem with student-led questionnaires on the quality of the teaching provision. More resources and time are being spent on attempts to assure quality in higher education. However, this is occurring in other sectors too (Brown, 2013).

The conceptual model introduced by Douglas *et al* (2008) and its application within the HE environment gave an indication of the critical drivers of satisfaction and dissatisfaction for HE students using the critical incident technique to encourage the retelling in narrative form of specific good and bad experiences. The idea was born out of earlier work by Edvardsson (1992) who used CIT to identify the impact of negative incidents of service quality in an airline services context from the customer point of view. His studies found that the customer perceptions were different from the front-line personnel when it came to describing events. Several researchers have used the CIT methodology to gather anecdotes from customers; several researchers have identified determinants of quality using various methods. However, there was no evidence that CIT had been used to explore the determinants of quality within a higher education setting. This was the impetus for the initial development of the conceptual model.

It was clear that the written narratives provided a rich source of data to help faculty understand what drives dis/satisfaction for their students and was arguably more useful than the traditional method of gathering student feedback and the resulting publication of mean scores for specific areas of teaching and learning. The research was continued to further legitimize the conceptual model of higher education student satisfaction and the utilisation of critical incident technique (CIT**Error! Bookmark not defined.**) for listening to the voice of the student. This was achieved by using CIT to survey a larger sample of undergraduate business students from two universities, in order to identify those service quality determinants that drive satisfaction, dissatisfaction (or both) and lead to a change in loyalty intentions, such as recommending the university and continuing with their programme of study at their university. Examples of the rich data provided by student respondents were included to help provide an understanding of what satisfies and dissatisfies students. It was proposed that these narratives would help in the process of diagnosing strengths and weaknesses in HEIs' service provision and act as a starting point for improvement in a way that is not possible with the current system of using mean scores to identify weaker areas of teaching and learning and its supporting environment. The table below identifies the new determinants of quality in higher education, as perceived by the students in their CIT narratives and coded by the three judges (Douglas, et al., 2014).

Table 1. Redefined Student – perceived determinants of Quality in Higher Education

Determinant	**Descriptors**
1. Motivation	The level of motivation inspired by the University's teaching, technical and library employees.
2. Praise / reward	The unexpected praise received on performance, for example, a high coursework mark or a prize for excellent work.
3. Social inclusion	The opportunity to meet new people; feeling accepted by peers and others.

4. Usefulness	Subject Matter stimulates the level of interest from the student, can be applied in the work-place, or in real life situations; industry-based learning, class sizes, computer programmes. Feedback on assignment submissions.
5. Value for money	This covers the fees paid for the programme of study, library fines, and printing costs. It may also include goods sold as part of the service, e.g. cafeteria / bistro
6. Fellow student behaviour	The impact of other students' behaviours on the experience of an individual, for example, when being formally assessed on group work activities.

Since the introduction of the applicant's conceptual model of student satisfaction with their experience in higher education at an international conference in Italy (Blackmore, 2005) various models of student satisfaction have been introduced into the higher education research field. Given that the student is one of the fee-paying customers of the higher education service, the contact personnel (such as the lecturer) who interacts with the student on a regular basis, will impact their perception about the service. Deming (1982) advised that most people form their opinion solely on the contact they have with the organisation's people. Therefore, it argued that the majority of students form their opinions of the higher education service on their interactions with their lecturers as well as with librarian personnel, office administrators, and other support staff. It is however, with their lecturers that they have the most contact time.

Students are not passive receivers of the service. Within the general service quality literature, there is also the idea of 'co-creation' (Hoyer, et al., 2010). In other words, the consumer, or in this case, the student, completes the action of the service provided by the university. Further to this idea of co-creation, or as it has been termed co-production, there is by definition, the concept of co-destruction of service. A number of researchers are investigating the more negative behaviours of 'other' customers and their impact on the service experience. A recent presentation in Sydney, Australia received the accolade of best paper in its track for the research into this in the tourism industry (Douglas, et al., 2013). Moreover, the concept of disruptive students and how their behaviour can affect other students was considered as part of another pilot CIT investigation by Douglas & Douglas (2013). The interest shown by fellow academicians at an international conference in Slovenia provided the impetus for further joint collaborative research in the future.

6 Conclusion

The study, *per se*, was carried out as an exploratory, iterative process that culminated in a number of published works and conference presentations. In line with educational research approaches as outlined by (Johnson & Christensen, 2004, pp. 8-9) the study began with a basic research approach, in order to generate fundamental knowledge on the area of quality in education and moved to applied research to ask the relevant work-based questions. It involved the development and subsequent testing and application of a conceptual model and was set within a UK HE context. The impact of the research is currently being realised and evidence from other publications that have cited the various papers resulting from this series of investigations will be discussed in light of the results.

The approach was a mixed methods one using a mix of qualitative and quantitative techniques to gather information and test and apply new theory. Real world application of the various measures has an impact on the academic profession. The various bodies also inform the issues raised under the heading of *Pragmatism.* In terms of *Policy* nothing has changed to reduce this requirement. Indeed if anything this has become increasingly demanding since the introduction of fees and more recently the increase in fees to up to £9,000 per annum to study in higher education in England. To summarise, it is the belief of academics interested in pursuing educational research that a scholar within the field of teaching should be supported in their investigations into their own discipline's learning and teaching. Service quality, student satisfaction and their loyalty behaviours have been explored in the real world sense. Several new determinants of quality were identified from the CIT survey and these were found to be critically critical, i.e. they lead to a change in loyalty behaviours and attitudes of students. This is an area that was previously unknown by university managers.

7 Implications for the future

Academics and administrators have witnessed an increase in students entering higher education since the start of this current series of research, despite the introduction of fees. The UK Government has been forced to reconsider their funding strategy in England, particularly given the global recession encountered by business and people worldwide. Vice Chancellors (or Chief Executive Officers) have long since moved towards a focus on income generation and commercial activity in the teaching and research areas. In order to evaluate how HEIs can improve upon financial performance by reducing waste, Douglas, *et al* (2013) applied the philosophy of 'Lean' to identify waste (the costs of poor quality) in higher education and so speed up processes; waste being the areas or activities that do not add value in the eyes of the consumer. They used a holistic approach of considering HEI operations in order to propose appropriate lean six sigma solutions and so improve customer satisfaction.

The lecturer's performance is influenced by a number of variables and plays a large part in how a student assesses the service quality of an HEI. However, what might be important but not measurable will not appear until a long time after the student has graduated and in the workplace full time. Therein lies the dilemma but provides the impetus for further research.

The research is continuing with an investigation into one of the new determinants of quality identified out of the CIT study, namely, fellow student behaviour. An investigation into disruption in the classroom has already been pilotted on a small scale and presented at an international quality conference, where it received substantial interest from other university staff. Whilst value for money is one of the new variables identified out of the research, with 58 narratives explicitly referring to it, it is actually an all-encompassing determinant and any quality organisation ought to be providing a value-added service. Resources can now be focussed on this area by university management.

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GLOSSARY

Deductive approach	Involves testing a theory by using a specifically designed research strategy. Associated with quantitative techniques.
Epistemology	How acceptable knowledge is created. It is a branch of philosophy.
Inductive approach	Involves developing theory from observing empirical data. Associated with qualitative techniques.
Interpretive paradigm	The understanding of the way we make sense of the world around us. (Interpretivism: the epistemological stance that supports the requirement to understand the variation between people in their role as social actors).
Method	Statistical and non-statistical techniques and procedures used to gather and analyse research data.
Mixed-model research	A combination of qualitative and quantitative data collection techniques and analysis methods. Also combines the two approaches in other stages of the study.
Positivism	The epistemological position that supports operating within an observable social reality. Uses a structured methodology to allow for generalisation.

13,778 words

Core Papers:

1. Douglas, Douglas and Barnes, (2006) Measuring student satisfaction at a UK university, Quality Assurance in Education, Vol.14, No.3, pp.251-267 (www.emeraldinsight.com/0968-4883.htm)
2. Douglas and Douglas, (2006) Evaluating Teaching Quality, Quality in Higher Education, Vol.12, No.1, pp.3-13 (http://www.tandfonline.com/doi/abs/10.1080/13538320600685024)
3. Douglas, McClelland and Davies (2008) The development of a conceptual model of student satisfaction with their experience in higher education, Quality Assurance in Education, Vol.16, No.1, pp.19-35 (www.emeraldinsight.com/0968-4883.htm)
4. Douglas, McClelland, Davies and Sudbury (2009) Using critical incident technique (CIT) to capture the voice of the student, The TQM Journal, Vol.21, No.4, pp.305-318 (www.emeraldinsight.com/1751-2731.htm)
5. Douglas, Douglas, McClelland and Davies (2015) Understanding student satisfaction and dissatisfaction: an interpretive study in the UK higher education context, Studies in Higher Education, Vol.40, No.2, pp.329-349 (http://dx.doi.org/10.1080/03075079.2013.842217)

Supporting Papers:

1. Blackmore and Douglas, Towards a ‘better’ university: the use of the EFQM model in a UK Higher Education Institution

Jacqueline Douglas Curriculum Vitae

CURRENT POSITION:

Senior Lecturer in Quality and Operations Management

Work address:

Liverpool Business School, Faculty of Arts, Professional and Social Studies, Liverpool John Moores University, Brownlow Hill, Liverpool, L3 5UG

Telephone: +44(0)151 231 3019 Email: j.a.douglas@ljmu.ac.uk

Academic Qualifications

- PhD LJMU, 2015
- MA Educational Management (Pass with Distinction) LJMU (2004)
- PgC(HE) (Pass) LJMU (2010)
- BA Combined Studies (Pass) LJMU (1998)
- ONC Public Administration (Pass with Merit) Liverpool Community College (1991

Professional Qualifications:

- *Academy of Excellence in Customer Care Training Champion (2006)*
- Six Sigma (Yellow Belt Certificate) Strathclyde University, Glasgow (2008)
- Chartered Quality Institute (CQI) Internal QMS Auditor, London (2009)
- Lean Six Sigma (Yellow and Green Belt) Knowledge Academy, Manchester (2012)
- Lean Six Sigma (Black Belt) Kenya Institute of Management (2014).

Membership of Professional Bodies:

- Academic Associate of the Higher Education Academy
- Member of the Institute of Six Sigma Professionals

Previous Employment/Employment History

- University Quality Officer
- Divisional Validation and Review Officer
- School Office Manager (Temp)
- Programme Administrator (for Diploma in Social Work, then in the School of Media Critical and Creative Arts).
- Clerical Assistant (Admissions) for Social Work courses
- Clerical Assistant (Personnel Temp).

Teaching

Quality Management, Operations Management, Lean Six Sigma Process Improvement and Internal Quality Management Systems Auditing at undergraduate levels 5 and 6.

Module Leadership

Quality and Operations Management (Level 5) and Lean Six Sigma Process Improvement (Level 6). Responsibilities include the design, delivery and assessment of these subjects as well as any associated administrative duties.

LJMU Corporate Citizenship Activities

- EFQM Assessor (cross-university exercise)
- Internal Audit Panel member
- Academic Impropriety Panel member
- Extenuating Circumstances Panel member

Research

Refereed Journal Publications:

Douglas, J.A., Douglas, A. and Antony, J. (2015) Waste Identification and Elimination in HEIs, *International Journal of Quality and Reliability Management*,

Douglas, J.A., Douglas, A., McClelland, R. J. and Davies, J. (2014) Understanding student satisfaction and dissatisfaction - an interpretive study in the UK higher education context, *Studies in Higher Education*, DOI: 10.1080/03075079.2013.842217

Douglas, A., **Douglas, J**. A. and Davies, J. (2010) Differentiation for competitive advantage in a small family business, *Journal of Small Business and Enterprise Development*, *17*(3), 371-386.

Douglas, J., McClelland, R., Davies, J. and Sudbury, L. (2009) Using critical incident technique (CIT) to capture the voice of the student, *The TQM Journal*, 21 (4), 305-318. ISSN: 1754-2731 / ISBN: 978-1-84855-798-7 (**Awarded Emerald Literati Network 2010 Outstanding Paper Award)**

Douglas, J., McClelland, R. and Davies, J. (2008) The development of a conceptual model of student satisfaction with their experience in higher education, *Quality Assurance in Education*, 16 (1), 19-35. ISSN: 0968-4883

Davies, J., Douglas, A. and Douglas, J. (2007) The Effect of Academic Culture on the Implementation of the EFQM excellence Model in UK Universities, *Quality Assurance in Education*, 15 (6), 382 – 401. ISSN: 0968-4883

Douglas, J and Douglas, A, (2006) Evaluating Teaching Quality, *Quality in Higher Education*, 12 (1) 3- 13. ISSN: 1353-8322

Douglas, J, Douglas, A, and Barnes, B (2006) Measuring Student Satisfaction at a UK University, *Quality Assurance in Education*, 14 (3), 251-267. ISSN: 0968-4883

Douglas, A and **Douglas, J** (2006) Campus Spies? Using mystery students to evaluate university performance, *Educational Research*, 48 (1), 111-119. ISSN: 0013-1881.

Blackmore, J.A. (2005) A critical evaluation of peer review via teaching observation within Higher Education, *International Journal of Education Management*, 19 (3), 218-232. ISSN: 0951-354X

Blackmore, J, and Douglas, A. (2004) The Use of the EFQM Excellence Model in a Higher Education Institute, *Journal of Management Systems*, 16 (3), 11-24, (USA) ISSN: 1041 – 2808

Blackmore, J.A. (2004) A critical evaluation of academic internal audit, *Quality Assurance in Education*, 12 (3), 128-135, ISSN: 0968-4883

Blackmore, J and Douglas, A (2003) "Towards a "better" university: the use of the EFQM Model in a UK Higher Education Institution" *The Asian Journal on Quality*, December, 4 (2). ISSN:1598-2688

Other publications:

Douglas, J. (2012) Lean Thinking: The new way of doing business (Cover Story), Management Journal, September, Kenya Institute of Management, Nairobi.

Research Articles in Development

Douglas, A., Muturi, D., **Douglas, J.,** Ochieng, J. and Sagwe, J. (2014) Adopting a Quality Strategy to make Nations Competitive in a Global Economy: The East Africa Story, Chapter in the forthcoming book in tribute to Gopal K. Kanji.

Douglas, A. and **Douglas, J.A**. (2014) have been invited to contribute two entries (Moment of Truth and; Quality Systems Auditing) for the Encyclopedia on Quality and the Service Economy, Editor: Dahlgaard-Park, Su Mi, Sage Publications.

<u>Refereed Conference Papers:</u>

Douglas, J. and Douglas, A. (2015) Mystery Shoppers: An Evaluation of their use as Service Performance Monitors, Proceedings of the 19th International Conference on ISO and TQM, Nairobi, Kenya, 7th – 9th April.

Awarded Best Paper in its track.

Douglas, A., **Douglas, J**. and Ochieng, J. (2015) Lean Six Sigma in East Africa: Findings from a Pilot Study, Proceedings of the 19th International Conference on ISO and TQM, Nairobi, Kenya, 7th – 9th April.

Douglas, J. and Douglas, A. (2013) Disruptive Students in Higher Education: Findings from a Pilot Study, Proceedings of the *16th Toulon-Verona Conference "Excellence in Services"* Ljubljana, Slovenia, 29th – 30th August. ISBN: 9788890432736

Douglas, J., Douglas, A., and Cooke, H. (2013). The Impact of Customer Behaviours on Other Customers' Service Experience. In *17th International Conference on ISO & TQM*. Sydney, Australia. **Voted Best Paper in the Service Quality and Supply Chain Management track.**

Douglas, A., **Douglas, J**. and Antony, J. (2013) Gold in the Mine: Recognising Waste in UK HEIs using Lean Thinking, Proceedings of the *1st International Conference on Lean Six Sigma for Higher Education*, Glasgow, Scotland, June.

Douglas, A., **Douglas, J.,** Antony, J. and Green, D. (2012) Applying Lean Principles to a Professional Service Firm: Findings from a Pilot Study, Proceedings of the *4th International Conference on Lean Six Sigma*, Glasgow, UK, March.

Douglas, A., **Douglas, J**. and Muir, L. (2011) Customer Comment Cards: A Critical Evaluation, Proceedings of the *15th ICIT conference*, Kuala Lumpur, Malaysia.

Douglas, A., **Douglas, J.** and Davies J. (2008) The Effect of Performance Measurement on People, Proceedings of the *13th International Conference on Productivity and Quality Research (ICPQR)*, Oulu, Finland.

Douglas, J., McClelland, R., Sudbury, L. and Davies, J. (2008) Comparing Critical Incident Technique and Survey Questionnaires as a means of Collecting Student Feedback, Proceedings of the *11th Toulon-Verona Conference on Excellence in Services*, Florence, Italy ISBN 978-88-8453-855-0.

Douglas, JA. (2008) Comparing Critical Incident Technique and Survey Questionnaires as a means of gathering student feedback in HE, presented at the *Faculty of Business and Law Research Conference*, Liverpool John Moores University, (June) Liverpool, UK.

Douglas, A., **Douglas, J**. and Davies, J. (2007) The Impact of Mystery Customers on Employees, Proceedings of the *10th International Conference on Quality Management and Organisational Development (QMOD*), Lund University Campus, Helsingborg, Sweden.

Douglas, J., McClelland, R. and Davies, J. (2006) The development of a conceptual model of student satisfaction with their experience in higher education, *9th ICIT Conference*, (April) Hong Kong.

Douglas, A., **Douglas, J**., Davies, J., Ross, J-P and Ross, P. (2006) Utilising Regulatory Practices for Competitive Advantage, Proceedings of the *29th Institute for Small Business & Entrepreneurship Conference*, Cardiff, UK, October.

Douglas, A., **Douglas, J.** and Barnes, B. (2006) The Student as Customer? Proceedings of the *9th Toulon – Verona Conference on Excellence in Services*, Paisley, UK, September, pp.291-303. (ISBN 1-903978-33-5)

Blackmore, J (2005) The development of a conceptual model of student satisfaction with their experience in higher education, *8th Quality Management and* ***Organisational Development Conference*****, Palermo, Italy, pp. 237 - 246.**

Blackmore, J and Douglas, A (2004) Mystery students – Has their time come? Presented at The *Learning and Teaching Conference*, University of Hertfordshire.

Douglas, A, **Blackmore, J** and Barnes, B. (2004) Assessing Student Satisfaction using the Service-Product Bundle Concept, presented at the JMU *Teaching and Learning Conference*.

Douglas, A. , **Blackmore, J.** and Barnes, B. (2004) Measuring Student Satisfaction at a UK University, Proceedings of the *7th Quality Management and Organisational Development (QMOD) Conference*, Monterrey, Mexico, pp. 97-112. ISBN: 970-773-015-3

Blackmore, J. and Douglas, A. (2003) Towards a "better" University: the use of the EFQM Model in a UK Higher Education Institution, Proceedings of the *6th Annual Conference on Quality Management and Organisational Development (QMOD)*, Paris, France.

Conference Papers in Development

Douglas, J., Muturi, D., Ochieng, J. and Douglas, A. (2014) Organisational Climate and Lean Six Sigma Sustainability, *Proceedings of the 5th International Conference on Lean Six Sigma*, Glasgow, Scotland

Research Interests

My main research interests lie in the areas of operations and quality management in the public and private sectors of industry, including education, services, hospitality and tourism.

Recent research interests include service performance feedback mechanisms including Mystery Shopping and Comment Cards, Service Quality, Lean and Six Sigma in Services and Manufacturing organisations and Customer Satisfaction with particular emphasis on customer misbehaviours. I have expertise in the use of Critical Incident Technique as a means of data collection and analysis.

Other Research Related Activity

Conference Activity

- Member of the organizing committee and paper review committee of the *9th International Conference on Quality and Organisational Development (QMOD),* Liverpool, UK, August 2006.
- Track Chair at the *11th Toulon-Verona Conference on Excellence in Services*, Florence, Italy, September 2008
- Keynote Paper "Customer Comment Cards: A Critical Evaluation", at the 15th International Conference on ISO and TQM: Sustainable Development through Innovation, Selangor, Malaysia, July 2011.

Journal Activity

- Papers reviewed for The TQM Journal; the International Journal of Coaching and Mentoring in Education; the Journal of Quality Assurance in Education; the International Journal of Marketing in Education; the European Journal of Marketing in Education and the Journal of Higher Education.
- Invited to join the Editorial Review Board of the International Journal of Coaching and Mentoring in Education (launched in 2012).

Miscellaneous Activity

- Reviewer for the IMRA-Kean International Conference, May 2014, New Jersey, USA
- Reviewer for the 1st International Conference on Higher Education Advances (March 2015)
- Guest Lecturer "Customer Comment Cards and Mystery Customers", at Queen Margaret University, Edinburgh, Scotland, (February 2013).
- Guest Lecturer, Management University of Africa, Nairobi, Kenya (2012)
- Publication seminars for Kenya Institute of Management (KIM), Nairobi, Kenya – (November 2011 and 2012).
- Invited to present one of the awards for best in category at the 12th Annual Organisational Performance Index Company of the Year Awards in Kenya (November 2011).
- Delivering Lean and Six Sigma Yellow and Green Belt training at the Kenya Institute of Management, Nairobi, Kenya (2012 and 2013).
- External examiner for the University of the West of Scotland (2007 – 2010).
- Liverpool Business School "Lunch and Learn" research presentation (2013)

Awards and Recognition

- Emerald Literati Network Outstanding Paper Award (2010) for her paper on using critical incident technique to gather student feedback (published in 2009).
- Emerald Literati Network Highly Commended Paper Award (2009) for her paper on the development of a conceptual model of student satisfaction with their higher education experience (published in 2008).
- *Short-listed for Liverpool Students Union Outstanding Teacher Award 2011 and 2012.*
- Best paper award under sub-theme 5 – Service Quality and Supply Chain Management at the 17th International Conference on ISO 9000 and TQM (ICIT) at the University of Technology, Sydney, Australia, August 2013.

Staff Development Activities

- Resident Skills Training Course "From Hypothesis to Article" – 24-28 April - (Paolo Lisboa) – Research and Graduate School (2006).
- Academy Training Champion session – Academy of Excellence in Customer Care (2006)
- Six Sigma in Healthcare ENBIS Workshop – 18th June (Dr Ron.S. Kennett and Dr Shirley Coleman) (2007)
- Introduction to Six Sigma – one day workshop (2007)
- Pedagogic Research Forum – 3rd November – Learning Development Unit, Liverpool John Moores University (2008)
- Lean Operations Workshop – The Institute of Engineering and Technology (2008)
- Critical Incident Technique Seminar (CIT) - (Professor D. D. Gremler) (2008)

- Lean Six Sigma Yellow Belt Certificate of Performance – three day course – Centre for Life Long Learning, University of Strathclyde, Glasgow (2008)
- Kansei Engineering Workshop (Professor M. Nagamachi) - Oulu, Finland (2008)
- Supporting Learning Professional Development programme – Liverpool John Moores University (2009)
- Kansei Engineering Training Course – (Dr Kim Pearce) - Industrial Statistics Research Unit, Newcastle University (2009)
- Internal Auditor of Quality Management Systems – Chartered Quality Institute (2009)
- Lean Six Sigma (Green Belt Certificate) – 5 days, Knowledge Academy, Manchester, UK (2012)
- Diversity in the Workplace; Data Protection – on line training – LJMU (2013)
- Minitab Training – 1 day – Stephen Anthony, Institute of Six Sigma Professionals (14th March 2014)