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**The Application of Performance Indicators to  
Quality Assessment and Audit in Higher  
Education.**

**DOCTOR OF EDUCATION (EdD)**

**15<sup>th</sup>. July 2005**

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# **The Application of Performance Indicators to Quality Assessment and Audit in Higher Education.**

## **Acknowledgements**

I would like to thank Professor John Pratt for his support and guidance throughout this project. I would also like to thank my family for their patience and tolerance.

# **The Application of Performance Indicators to Quality Assessment and Audit in Higher Education.**

## **Abstract**

This report describes research to investigate whether the use of performance indicators could improve, enrich or enhance the process of academic quality review. It uses a new technique based on soft systems methodology and developed by researchers at London South Bank University. This technique, referred to as the Holon methodology, has been adapted from the domain of software quality assurance and can be used to help develop performance indicators from successive refinement of the vision of a “desired state” of various stakeholders within a system. The research does not assume the existence of any particular system of quality assessment or audit but starts from first principles, through a literature review of work on both quality assessment and audit, and on the use of performance indicators in higher education. The main phase of the research is a series of interviews with academic staff and students to elicit views on what constitutes a high quality student experience. Seven performance indicators are produced and the research also addresses the use of quality assurance terms and techniques from outside higher education. The suitability and limitations of the methodology are also discussed

## Declaration

The author wishes to declare that the work in this thesis is his own and conforms to the University policy on plagiarism. None of the work presented has been submitted for a degree, diploma or any other qualification at any university.

The work references some material previously presented at conferences but, in the case of joint authorship, the author confirms that the work referenced was his own contribution.

These papers are as follows.

CLARE, C., (1994), *Introducing a total quality approach at a UK university*, International Conference on Quality in Higher Education, Hong Kong.

CLARE, C., (1995), 'Introducing TQM in a new university: practical lessons', in KANJI, G.K., *Total quality management. Proceedings of the first world congress*, London, Chapman and Hall.

KENNEDY, M., CLARE, C.P., (2003), 'A comparison of the application of performance indicators, system dynamics models and the holon framework to quality assessment in higher education', *21<sup>st</sup> International conference in system dynamics*, New York.

**Signed**.....



## **CHAPTER 1:INTRODUCTION AND BACKGROUND**

### **Introduction**

A great deal of energy and resources in higher education are currently devoted to quality assurance and audit. This has resulted from a variety of initiatives, many of which started to emerge some twenty years ago. At the start of the 1980s the belief in the need to increase efficiency in higher education developed, as a consequence of general Government policies to improve public accountability and performance and adopt a more market-oriented approach in all public services. This was part of the policy intended to cut public spending, which led to the severe cuts in higher education funding of 1981.

Increased criticism of, and more direct involvement in, higher education by various government bodies including the Department of Education and Science, the Department of Trade and Industry and the Department of Employment (through the Manpower Services Commission) (Maclure, 1989, p. 93) was one aspect of the pressures to bring greater Government control to the sector. Both the Green Paper in 1985, and the 1987 White Paper stressed the need for higher education to be geared towards the needs of business and industry and for greater scrutiny of the efficiency of performance of universities (Department of Education and Science, 1985, p. 49; Department of Education and Science, 1987, pp.18-23).

A great deal of the initial criticism was directed towards the university as opposed to the public sector (polytechnics). At that time, the polytechnics were under the jurisdiction of the Council for National Academic Awards (CNAA), which had overall responsibility for course validation. They were also scrutinised by the Department of Education and Science and were subject to formal inspection of teaching and other operations by Her Majesty's Inspectors

(HMI). However, the White Paper, and the subsequent Education Reform Act (1988), followed by the Further and Higher Education Act (1992) effectively led to the disbanding of the CNAAs as a national quality assurance body through the granting of autonomy to the ex-polytechnics (Department of Education and Science, 1988; Department of Education and Science, 1992).

The 1992 Act unified the higher education sector by removing the last traces of direct control by Government or local authorities from the polytechnics.

Although indirect control via the funding councils remained, they became autonomous institutions. The Act also enabled them to adopt university titles, and have the full degree awarding powers of the traditional universities.

Funding for the new unified sector was channelled through the Higher Education Funding Council for England (HEFCE) which was also charged with ensuring value for money in the grants that were channelled to the universities.

In the debates of the 1980s, there seemed to be a political need to develop clear systems of quality assurance, in part to justify Government expenditure on higher education (Kells, 1999, p. 223). This resulted in pressure for the development of metrics and performance indicators as part of the system of monitoring universities (Harvey and Knight, 1996, p70) and the use of performance indicators for higher education was one of the thrusts of Government plans to emphasize efficiency and effectiveness in the management of universities. Some sections of the White Paper 'Higher Education: Meeting the Challenge' illustrate this.

“Essential data on performance in each institution should be published so that its record can be evaluated by the funding agencies, governing bodies, students and employers”

(Department of Education and Science, 1987: pp. 18-23)

Various groups and committees had made proposals for the development of metrics and indicators (Cave et al, 1997, pp. 9-21). These included the Jarratt report (CVCP, 1985), which proposed the introduction of a set of performance

and other indicators for use by institutional managers and the National Advisory Body for Public Sector Higher Education (NAB) published a report, which recommended a series of performance indicators for use in the polytechnics (NAB, 1987). The Warnock report proposed the development of metrics to be used in assessing teaching quality (PCFC, 1990a). In the same year, another group, initiated by the Polytechnics and Colleges Funding Council (PCFC), undertook a study into the potential use of performance indicators for institutional management (PCFC, 1990b).

The resultant moves towards increased measurement of the activities of institutions were seen as a symptom of “managerialism”, involving attempts to increase efficiency and reduce costs using methods to assess institutional performance and subsequently reward or punish (Trow, 1994, p. 13-15). This trend towards managerialism was also felt to be symptomatic of a lack of trust by Government in the academic community to maintain appropriate levels of quality control at a reasonable cost (Harvey and Knight, 1996, pp. 68-70).

Following the Further and Higher Education Act, there were a variety of attempts to develop systems of quality assurance and audit. These were undertaken by HEFCE and by the Higher Education Quality Council (HEQC), a body owned and funded by the universities. These systems included both subject-based review and audits of the institutions’ own systems for quality assurance. The aim was to ensure that the variety of different stakeholders, including the Government, employers of graduates and current and potential students, had the confidence that a degree awarded by a UK university met certain minimum standards.

The Quality Assurance Agency (QAA) was set up in 1998 and developed methods of subject based quality assurance and institution based quality audit. Further work has resulted in the development of a national qualifications framework and of benchmarks for degree level study in each discipline. The QAA has also introduced a requirement for universities to adopt standard

methods of programme specification and there is a series of sections of a recommended “Code of Practice” (Quality Assurance Agency, 2000a) covering a variety of university activities such as validation of courses, assessment strategy and external examiner systems.

Most of the processes to date have involved self-assessment by the institution coupled with peer review, with the emphasis on qualitative methods of review. This has led to criticisms of inconsistency, where there have been suggestions that the outcome of the review, and under the previous system, the grades awarded to the university, can be influenced by the make-up of the team and the ability of the team leader (the reporting assessor or review Chair). To date, despite the rhetoric on performance indicators indicated above, there has been no attempt to incorporate more quantitative elements, or performance indicators, into the academic review process.

### **Research Aims and Objectives**

The overall aim of the research programme was to investigate ways in which a more quantitative element in the quality assurance process may be used to improve, enrich or enhance the assessment, audit and management of academic quality in higher education. The main objective was

“The development of a set of performance indicators that could be used as part of a process of academic assessment, audit or review to help measure the quality of the student experience of learning and teaching.”

The intention was to use a recently developed technique from the fields of soft systems methodology and systems dynamics to produce such a set of indicators focussed on the quality of the student experience.

The issue of the use of performance indicators in higher education has been controversial and there have been various studies and consultations where performance indicators have been proposed but not widely adopted. In the

majority of cases, the discussion of performance indicators has concentrated on the assessment of the efficiency and effectiveness of institutional management and many authors express doubts as to the role of performance indicators in the assessment of the quality of the learning and teaching experience of students (Cave et al, 1997). The higher education environment appears to differ significantly to other industries and sectors in that links between performance indicators and “product” or “service” quality are often a major feature of the management systems in those other industries and sectors. It is possible that higher education is so specialised that building such links is inherently more difficult or it may be the case that the appropriate tools to build the links have not (until now) been available.

This perceived lack of support for performance indicators within the higher education community was explored as part of the review of the literature. As a consequence, it is unlikely that proposals to adopt the indicators developed as part of this research, no matter how well argued the development methodology, would be readily welcomed by the academic community without further evidence that they are effective. It is therefore important that the performance indicators developed as part of the research are tested to ensure that they are feasible in terms of their implementation in a working academic environment and are acceptable to the staff who are asked to use them. To this end, the indicators will be adopted and tested as part of a new system of quality assurance that is to be introduced into a Faculty at London South Bank University. The testing will be undertaken as a separate exercise as it is beyond the scope of this research in terms of timescale and resources.

It was not the aim of the research to explore the advantages and disadvantages of performance indicators as a management tool in general or to develop a discourse on the applicability of performance indicators to the higher education environment. In that sense, it did not set out to justify their use in the sector. Instead, it started from the premise that performance indicators are a permanent feature in many manufacturing and service environments and that it may be

possible to develop a set that would be feasible for use in measuring some aspects of the quality of higher education. Performance indicators have been introduced into higher education at various times. These indicators have usually focussed on the efficiency of institutional management, rather than on the quality of the student experience, and they have met with considerable resistance in the sector. Some of this resistance is to the notion that performance indicators could play any significant part in the educational process (Kells, 1992, p.56, Mintzberg, 1996, p.79) and other resistance has been to the particular indicators that were put forward (Harvey, 1996, p.77, Barneston and Cutright, 2000, p.286). It is therefore valid for this research to attempt to develop indicators that may be seen as more appropriate or relevant to the management of the quality of the student experience in higher education than those used hitherto.

### **Research Focus**

The holon methodology, described in Chapter 2, was designed to analyse a strategy to achieve a vision of a desired future state (in this case improved quality in higher education) and the development of performance indicators to help in achieving and measuring progress towards that vision. In doing so, it is designed to direct the researcher towards the discussion and analysis of aspects of quality assurance that can lead towards metrics or performance indicators. There are limitations in this approach in that the methodology, if applied correctly, assumes that the user has the intention of developing metrics and it guides the user towards achieving that objective. In doing this, it steers the user away from consideration of the benefits or utility of performance indicators, and it can also prevent the exploration of aspects of quality that are unlikely to lead to a metric. Such issues arising from the research were noted in Chapter 7.

The methodology was originally developed in an entirely different field to that which it is applied as part of this research. It was developed as an aid to software development process improvement and has been adapted by the

London South Bank University team to the problem domain of planning and costing processes. The research reported in this dissertation has taken the holon methodology further to adapt it to the assessment of quality in higher education. The study of the quality of the student experience in higher education is an excellent example of a human activity system and consequently, the methodology was seen as appropriate for the research problem. Part of the research was to test this hypothesis.

The starting point of the research was to look at the issue of quality in higher education, where possible from first principles. The current QAA methodology was not taken as a starting point since, firstly, it may not have been particularly soundly derived and secondly it had recently been put into abeyance pending a sector-wide consultation exercise, which had resulted in a complete revision of the QAA approach to assessment and audit. Consequently, the research looked at quality in higher education in more general terms. In doing this it was necessary to look at some of the history of quality assessment and audit in higher education, mainly in the UK. The research also looked at the various attempts to apply performance indicators to higher education and the problems associated with their subsequent development and/or implementation.

Using techniques described in Chapter 3, an exercise was undertaken to elicit the views of various stakeholders on the intended purpose or outcome of a quality assessment and improvement process. The main research interviews were preceded by a series of initial interviews, which formed the initial framing stage of the methodology used and this stage was restricted to a sample of staff from new universities, with most being from London South Bank University. The main research interviews investigated whether the processes and procedures that the interviewees felt contributed to a quality student experience would benefit from consideration of the inclusion of the emergent performance indicators, whether such consideration is possible, whether it is desirable and how best it could be achieved. In doing this, the research involved a detailed consideration of the different approaches to measurement and assessment of the

quality of higher education. It also studied current approaches to the definition and use of performance indicators in other areas of education (Aspinwall et al, 1994) and in other areas of business.

The final aspect of the research was the investigation of whether some of the existing quantitative and statistics-based approaches to quality management, used in other areas of activity are applicable in higher education. In investigating how quality assurance processes in manufacturing and other service sectors might be adapted for use in higher education, the research led to a significant finding. This was the possible difficulty in the adaptation of the use of the terms “fitness-for-purpose” and “conformance-to-specification”.



## **CHAPTER 2:LITERATURE REVIEW**

### **Quality Assessment and Audit in Higher Education**

Before the Further and Higher Education Act of 1992, the public sector of higher education (the former polytechnics) had considerable quality assurance mechanisms in place that provided accountability and attempted to ensure some comparability of standards across the system. So, in order to discharge their duties of ensuring value for money, the newly formed Higher Education Funding Council for England (HEFCE) set up mechanisms for quality assessment on a subject by subject basis, centred on qualitative self-assessment, coupled with inspection visits along the lines of the former CNA/HMI (HEFCE, 1993). However, the approaches to quality management and enhancement adopted by other industries at the time also included the measurement and testing of an organisation's own systems of quality audit and, to cater for this aspect, a separate organisation for higher education was set up. This organisation was the Higher Education Quality Council (HEQC) and was owned and part-funded by the universities themselves. Thus the responsibility for "quality" in English universities was vested in two essentially separate organisations, each of which adopted a different approach to its work and placed different demands on the universities to prove compliance with their defined quality standards (HEQC, 1996).

Through the mid 1990s, both organisations developed systems that involved universities in producing written self-assessments, backed by substantial amounts of evidence in the form of documentation, and followed by a visit from a group of peer reviewers. These reviewers would have the authority to interview staff and students, observe teaching sessions or other activities and request additional documentation. Both assessment and audit resulted in a published report detailing areas of good practice and areas where some

improvement was thought necessary. In addition to the part-time reviewers and auditors drawn from existing higher education staff, full time staff members were recruited to both organisations.

The HEQC approach centred on institution-wide visits, and was part of a rolling programme of audit. The overall aim was to investigate the institutions' own systems of quality management and control in order to be able to satisfy itself of the broad comparability of standards across UK institutions of higher education. The resulting report commented on various parts of the institution's operational procedures. These included the institution's teaching and learning strategies, development, validation and review of programmes of study, and assessment, progression and award procedures. It also commented on the institution's staff development procedures and general information and feedback mechanisms. The reports included sections where examples of good practice were highlighted and areas where improvements may have been necessary, were published, and made available in the public domain. They provided comment and constructive criticism, but did not mark or otherwise rate the institution (HEQC, 1995).

The first system for teaching quality assessment was proposed by HEFCE in 1993. The process involved setting up a rolling programme of subjects to be reviewed. Each academic department or unit covering the subject under review was required to write a document in the form of a self-evaluation, which addressed a number of areas relevant to teaching and learning. Departments were allowed to claim that their provision was "excellent" and if so, they were expected to provide evidence to back the claim in the document. Reviewers read each document and formed an initial judgement. All departments claiming excellence were subject to a visit by a team of reviewers who would interview staff, observe teaching, speak to students and look for other forms of supporting evidence. Departments deemed likely to be unsatisfactory from their document were visited as were a random sample of other departments. At the end of the

process, all departments were graded “excellent”, satisfactory”, or “unsatisfactory” (HEFCE, 1993).

A revised method for teaching quality assessment was proposed by HEFCE to start from 1995. Again, subjects were programmed for scrutiny on a rolling basis, and the new method still required the department to complete a self-evaluation document. Six core aspects of provision were specified and these had to be addressed in the document. The main difference with the new methodology was that all departments were subject to a visit by a team of reviewers. They looked for evidence on which to judge the six aspects and, at the end of the visit, the department was awarded a mark out of four for each of the six aspects, together with detailed commentary on the aspects and comments on the standard of the provision (HEFCE, 1994). Departments scoring 22 or more out of the possible 24 were unofficially deemed as excellent.

In an attempt to simplify what had become a rather cumbersome “industry”, to respond to the recommendations of the Dearing report (National Committee of Inquiry into Higher Education, 1997), and maintain an independent review function, it was agreed to merge the two bodies and the Quality Assurance Agency for Higher Education (QAA) was formed in 1998. The QAA also reassessed its approach to quality assessment and audit in an attempt to reduce the burden on institutions that the time and costs of producing the documentation and of participating in the visits required.

During 1999 and 2000, a new methodology of academic review was developed and announced by the QAA (Quality Assurance Agency, 2000b). Although the methodology was tested in a number of Scottish universities, it attracted a considerable amount of criticism from a group of research-intensive universities (known as the “Russell Group”) and others, who saw it as placing excessive demands on institutions for what they viewed as a flawed method of quality review. As a result of this and other pressure from the sector, the then Secretary

of State announced that the approach should be reviewed, allowing for a “lighter touch” in those institutions deemed to have the confidence of the QAA and other stakeholders in the sector in the quality of their provision. As a consequence, the HEFCE wrote to institutions inviting comment on such an approach, which placed greater emphasis on institutional audit and less on subject based review (HEFCE, 2001).

The responses to consultation indicated that the emphasis for future activity should be on the audit of an institution’s own quality management and enhancement systems as a way of assuring the Government and other stakeholders that the education provided is fit for purpose and conforms to specification.

In March 2002 the QAA finally published the operational description of their new audit based approach to quality assessment (QAA, 2000b). The method is based around institutional audits that examine three main areas. The first is the determination of how effective the institution’s own quality assurance processes are. This looks at a number of areas including the extent to which the institution can demonstrate that it complies with the QAA codes of practice, and the ways in which the institution reviews the quality of its educational programmes and the standards of its awards.

The second area of examination concerns the accuracy, the completeness and the reliability of the information that the institution publishes about the quality of its programmes and the standards of its awards. The aim is to determine the degree of trust that can be put in those institutional descriptions of quality and standards. The third aspect of the audit is the examination of a number of the institution’s internal quality assurance processes at work. These can be at the level of the educational programme or more general processes covering an area of activity that contributes to the assurance, such as the management of collaborative programmes. Again, the aim is to determine the level of confidence in the institution’s processes for assuring quality and standards.

Judgements are made about the soundness of the management of the quality of the programmes and the standards of the awards at the institution and at the level of confidence that can be placed in the reliability of the institution's documentation. The auditors report either "broad confidence" in the institution and its processes or qualified confidence with indications of those areas where the auditors may have some concern.

There were still references to the need for some subject level assessment for:

- (i) Subjects not yet reviewed under any of the previous HEFCE or QAA methodologies
- (ii) Subjects where a visit was not a compulsory part of the process
- (iii) Subjects deemed weak during previous reviews at that institution.

The document describing the new system for academic review indicates that the responses to the consultation have been noted (QAA, 2002b).

It could be argued that moves away from subject assessment and its natural emphasis on the student experience towards audit and its concentration on systems naturally lends itself to the greater use of metrics and other indicators, even if many of them are discrete and binary (i.e. yes/no). Indeed, the QAA set up a group to define data sets that it will require institutions to produce as part of the audit process. However, as there are still elements of subject level assessment, the scope of this project remains valid. Indeed, the scope could become wider by comparing the indicators that may result from the research with those that may emerge from QAA "data sets". Concurrent to these developments, the QAA also set up a series of working groups to produce "benchmark specifications" for degree courses in each discipline (Quality Assurance Agency, 2000c). The other areas of activity of QAA were in the development of a common framework for higher education qualifications and the Code of Practice (Quality Assurance Agency, 2000a).

Many of these initiatives were a direct result of changes in Government attitude to the public sector in general and higher education in particular heralded by the first Conservative Government, under Margaret Thatcher in 1979 (Cave et al, 1997, p. 3). Some of the motivation for this was for the Government to be assured of the fundamental purposes of a quality assurance process which included the need to secure value for the money invested, the need to encourage continuous improvement and the need to provide accessible information on the quality of higher education for all stakeholders in the system (Clark, 1997, p. 219).

It was Trow's view that the moves towards greater teaching and research assessment were a symptom of "managerialism". He used this term to describe the moves by institutional management to increase efficiency and drive down costs using methods to assess and subsequently reward or punish (Trow, 1994, pp. 13–15). Harvey also uses the term to describe

“the tendency for professional managers, through their decision-making role, to alter academic processes on the basis of non-academic criteria, amongst which financial criteria have been prominent” (Harvey and Knight, 1996, pp. 68-70).

This phenomenon was seen as part of a move towards a more formalised structure and more direct control of higher education by Government through institutional management. Kells also commented critically on what he saw as moves towards

“permitting the state and its agents to gain the initiative in and control of quality” (Kells, 1999, p. 210).

This trend towards managerialism may have been the result of a certain amount of lack of confidence by the Government in the academic community to

maintain appropriate levels of quality control at a reasonable cost, as well as a more general concern with the “bottom line” (Trow, 1994, p. 15). Harvey cited a general drive towards continuous quality improvement for a reducing unit cost as part of this trend (Harvey and Knight 1996, p. 70). The resulting increase in assessment and audit requirements led to an increase in the attention paid to management and administration within institutions and an increase in cross-institutional units being set up with a role to manage systems and processes designed to manage and enhance quality (Brown, 2004, p. 89).

Part of the political need was to have a rigorous and transparent system of quality assurance as part of the justification of Government expenditure on higher education, regardless of whether or not there were any perceived problems in the sector (Kells, 1999, p. 223). This in turn adds pressure for the development of metrics and performance indicators as part of the system of monitoring institutions (Harvey and Knight, 1996, p70).

Throughout the 1980s and 1990s, the pressure on resources, together with the need for greater diversity as part of a general expansion and increased international activity and competition in higher education all contributed to a further growth of interest in quality assurance and management. The majority of institutions had yet to realise the significance of competition in higher education. The environment had become more competitive with institutions trying to hit their targets for student recruitment, if necessary at the expense of their neighbours. Since many institutions offer broadly the same type of courses, it is the quality of what they have to offer which will determine whether they are successful in attracting students and other contracts. The successful university must increase its reputation as an institution that provides a high quality learning experience for students. Traditionally, there has been little argument that this encompasses quality of the academic programmes, but it must now also mean quality in how these programmes are delivered and in how well students are treated in all other aspects of the service provided by the University; in other words the quality of the total service package (Clare, 1995, p. 442). Welsh and Dey also cite increased competition between institutions and

the need to increase student recruitment and retention as one of the main drivers of increased interest in quality assurance. They also see institutions using a high quality rating as a weapon of competitive advantage (Welsh and Dey, 2002, p. 18). Different approaches to the issue became apparent, including focus on academic subject, focus on the quality of pedagogy, on institutional management and on the outputs of the system in terms of the employability of the graduates. (Brennan and Shah, 2000, pp. 11-14).

Institutions have different mixes of subjects and processes of quality assessment and management can be affected by subject disciplinary features. Hard sciences and engineering have features that may be more amenable to measure than humanities subjects (Kekale, 2000, p. 484). As well as intra institutional there are inter institutional differences. Brennan and Shah comment

“the large variations which exist in institutional contexts make it difficult to predict the effects of the introduction of quality assessment in any particular institution and make it desirable to adapt assessment methods to the context of the institution” (Brennan and Shah, 2000, p. 49).

There are also issues that arise from the fact that the benefits of higher education are not all short-term. The performance of a particular lecturer in a certain class session may be rateable in a quality sense. However, the medium term aspects (for example, is the student equipped for further study or appropriate employment) and the longer term (has the student acquired the critical thinking skills necessary for life-long learning) are much more difficult to rate (Lawrence and McCullough, 2001, pp. 141-148).

Another area where there are difficulties in measuring quality in higher education centres on the notion of peer review. This is at the heart of most processes of quality assurance in higher education, mainly because of the lack



of any universally accepted performance indicators or other metrics upon which to base judgement. The main problem is one of subjectivity. As Cave et al put it

“the essence of peer evaluation is that it is connoisseurial: evaluators apply their own values, knowledge and beliefs formed within their own practices and experience to the judgements they make” (Cave et al, 1997, p. 117).

These experiences will have been formed by the evaluators’ own institutional environment, which can be very different to the one under scrutiny. Much depends on how the “peers” in peer review are defined (Clark, 1997, p. 221), and some writers do acknowledge the opportunity for exploration of issues in a professional and focussed manner with colleagues as a benefit of peer review (Bingham and Otterwill, 2001, p. 36).

Attempts by HEFCE, QAA and others to overcome the issue of reviewer subjectivity by defining various forms of evidence (institutional documentation both specifically drafted and “off-the-shelf”) have led to criticisms of institutions being overburdened. This, together with the often excessive time and staff effort needed to prepare for and participate in quality assessment exercises has been a major area of criticism of the process and its agents and has led to a number of UK universities threatening non-participation in the QAA revised procedures for academic review. As Brennan comments

“quality is taking up a lot of time. Across the world academics are busy assessing each other.” (Brennan, 1997, p. 23).

### **Quality in Sectors Outside Higher Education**

Attempts were made by the higher education community to take systems and models from other areas of service provision and other industries to see if they could be adapted to the higher education environment. One of the ways in which systems and

procedures for quality assurance and control from other industries are influencing higher education is through the import of terminology, and one of the first areas of interest is the notion of “fitness for purpose” (Clark, 1997, p. 223). For many years, manufacturing industry has defined quality in terms of “fitness for purpose” and “conformance to specification”. Fitness for purpose is determined during the design phase and conformance to specification concerns the operational processes that go into the construction of the product. Fitness for purpose and conformance to specification are concerned with how well the design addresses the market needs and how well the process adheres to the design specification and this combination determines the quality level (Hill, 1991, p. 369). The two aspects are of course closely linked. Most of the problems concerned with lack of conformance to specification can also be traced back to design quality: either the design of the product or service itself or the design of the processes to produce it (Richardson et al, 1995, p. 614).

The notion of fitness-for-purpose, then, was developed from the vocabulary of manufacturing industry and it is relatively easy to see how it is applied to a manufactured artefact. Basically it relates to the questions “Does it (the artefact) work?” or “Does it do the job that it is supposed to?” Conformance to specification refers to whether the artefact performs in the way that the manufacturer says that it will. Unfortunately, there are some products and services where the distinction is not as clear-cut. These occur where the product itself is intangible or where a service is being delivered. A good example of the former is computer software where the definition of quality has always been problematic and where the industry is still striving to find

“practical ways of testing for the relative presence or absence of quality”(Hughes and Cotterell, 1999, p. 258).

It may not be enough that the programs run and produce reasonable results; they need to run efficiently, be relatively error free and be economical to maintain, all three of which are difficult to measure. In service industries (such as higher education) the issues are complicated by the intangibility of the service, the role of the customer as

part of the service delivery package and the fact that the customer's perception of the service quality is subjective (Voss et al, 1985, pp. 140-141).

### **Fitness for Purpose in Higher Education**

Attempts to import the notion of "fitness for purpose" from manufacturing into higher education have been made (Clark, 1997, p. 223). Harvey describes fitness for purpose as one aspect of quality in higher education. He describes the notion as being something that does the job for which it is defined and goes on to describe it as being associated with the drive for perfection and zero defects. Although "zero defects" is a difficult concept when discussing higher education, the alignment of the manufacturing definition of fitness for purpose as relating to the design stage aligns with Harvey's view. He goes on to raise the problem about fitness for purpose also being seen as meeting the "customer requirements" where there are a variety of notions of who the customers of higher education are and their possible lack of ability to specify exactly what they require (Harvey and Knight, 1996, pp. 5-7).

There are a number of difficulties in translating the other side of manufacturing's two pillars of quality, conformance to specification, into higher education. In discussing the merits of using surveys to measure student satisfaction, Harvey suggests,

"customer satisfaction is indicative of fitness for purpose" (Harvey and Knight, 1996, p. 6).

Whilst this is true, customer satisfaction is equally concerned with whether the product or service did what the manufacturer or provider said it would.

Brown discusses fitness for purpose in terms of economic relevance of programmes but also highlights the need for a "fitness of purpose view of quality" and refers to the

“confusion at the heart of the process between a fitness for purpose and a fitness of purpose approach to quality”(Brown, 2004, pp. 86-87).

Here, Brown is referring to the recommendations that emerged following the publication of the Dearing report (National Committee of Inquiry into Higher Education, 1997) suggesting a move towards fitness of purpose and incorporating the scrutiny of academic standards as an aspect of fitness for purpose (Brown, 2004, p. 153). Watson also refers to fitness of purpose as being the background to the ways in which institutions determine their own aims and objectives (Watson, 1995, p. 329). None of these authors mention the term “conformance to specification” although there do appear to be aspects of the notions of fitness of purpose that could better be described as conformance to specification. This may help to clear some of the confusion that Brown refers to.

Interpretations of the “customer” and the “quality” of the product are one of the major difficulties in adapting standard quality models to higher education (Owlia and Aspinwall, 1996, p. 12). The majority of quality assurance and management systems operating in other environments take, as a starting point, the identification of the customer of the product or service. This is a major dilemma in higher education because an inter-related variety of customers can be identified. The customers of most commercial organisations can be fairly easily identified. However, a university's customers fall into four distinct groups. Firstly, the students of the institution are its customers (as well as its product). They expect the institution to provide a service in the form of a course of study leading to a recognised and valued qualification as well as a general educational benefit. Applicants today are thought to be far more particular about the choice of their course of study and the host institution than their predecessors. Part of the reason is probably the severe pressure on student finance, leading to the necessity to take out loans or be subsidised by parents and this tends to focus the mind towards looking for quality and value for money (Clare, 1994, p 3). Many students are also looking for flexibility to leave and possibly re-enter higher education at various points, to modify the direction of studies and even to change institutions. This gives further support to the idea of quality as a competitive weapon.

Lawrence and McCullough identify students as one of a number of customer groups but point out the problem of students as customers in that they are not in a position to evaluate fully the education that they receive (Lawrence and McCullough, 2001, p. 140).

The second category of customers is the employers of graduates of the institution. Employers have needs for well-qualified, well-educated, flexible and adaptable employees in the shape of new graduates. Success in this area leads to other benefits such as investment by employers in research, development, consultancy and short courses with the institution. Because of the importance of employers to a university, a careful balance needs to be struck. One way for universities to build courses is to base material around the latest theoretical research and this has been an approach adopted by some institutions. It can be seen to have been successful in providing the UK with first-rate scholars. The direct needs of industry have often been seen as being satisfied with training courses and these are not normally the province of the universities. Some universities, however, have always sought to try to satisfy the needs of industry directly as part of the degree and diploma courses they offer. They have managed to develop a balance between up-to-date material that will enable the graduate to become immediately useful to an employer, and material designed to provide a firm underpinning which enables the student to be flexible and adapt to future changes in the industry or in technology. Consequently, employers are looking for a high quality “product” in the form of the university’s graduates.

The third group of customers is the Government through the university funding agencies such as HEFCE, other Government agencies (for example, the Research Councils) and the European Union. These bodies are the major providers of funds to a university for the foreseeable future. They should therefore be regarded as customers with needs to be satisfied. The methods by which this is currently achieved are through the institutions recruiting student numbers to target, graduating quality students, completing the funded research

and so on. In addition to this, performance indicators and measures of quality are increasingly suggested as a means of moderating the funding applied to the institutions.

The final group of customers for the services of a higher education institute is the wider community (Clare, 1995, pp. 442-3). Each institution has obligations (although it may not have realised them) in the areas of:

- (i) contribution to the wider academic community
- (ii) providing services to the international community via the enrolment of overseas students, collaborative research, consultancy and other projects.
- (iii) access to the facilities of the institution for the local community
- (iv) to the welfare of society in general.

Mintzberg is another author who looks at the difficulty of the notion of customers of a “government service” within which he includes education. Rather than use the term “customer” he prefers the notion of a client as being more appropriate in that it is associated with the receipt of professional services by a cooperatively owned organisation or a partnership (Mintzberg, 1996, p78).

The difficulty of assessing service quality is further complicated by the expectations of customers. There can be distinctions between the explicit service and the implicit service. The former would include such factors as the availability, consistency and comprehensiveness of the service and the latter, the attitude of the service delivery staff and the general atmosphere of the service environment (Hill, 1991, p405). This makes quality even more difficult to define and the customer may have his or her own specification determined by previous experiences of (other) services, by advertising, by pricing or just by

“hearsay” (Voss et al, 1985, p137). In this sense, quality and excellence are not important in themselves unless they are valued by the customer;

“it is the customer’s perception of quality that counts” (Richardson et. al, 1995, p613).

The customer involvement in the service package and its delivery means that his or her own competence as a participant in the transactions of the service can affect the quality. Customers can be thought of as being involved in the creation as well as the consumption of value (Prahalad and Ramaswamy, 2000, p80). This implies that as part of the service design, thought needs to be given to training customers in the roles that they play as part of the service (Voss et al., 1985, p139).

It is important to be able to differentiate aspects of quality assurance from quality control and the different degrees of formality required (Becher, 1999, pp. 227-229). The quality of a product or service is the responsibility of the producer and that responsibility should not be passed on to an inspector. The role of the inspector should be that of an auditor to ensure that the quality assurance procedures built into the production process are operating effectively (Hill, 1991, p369). Those procedures need to be able to measure the quality of the various stages of the construction of that product or service and measurement is facilitated by trying to develop as many metrics or indicators as possible. Even with intangible products such as software it is important to derive metrics, even if they have to be coerced. The reason for this is that it may be the only way to prove full conformance to specification (Hughes and Cotterell, 1999, p240).

### **Performance Indicators**

The use of performance indicators for higher education was one of the aspects of Government plans to emphasize efficiency and effectiveness during the 1980s. Some sections of the Green Paper ‘The Development of Higher

Education Into the 1990's' and the 1987 White Paper 'Higher Education: Meeting the Challenge' illustrate this.

“The essential purposes of performance measurement in higher education into the 1990's are to introduce into consideration of policy and the management of the educational system at national and institutional level some concrete information on the extent to which the benefits expected from education expenditure are actually secured and to facilitate comparisons in terms of effectiveness and efficiency as between various points of the systems and as between different points in time”

(Department of Education and Science, 1985: p. 49)

Various other groups and bodies have made proposals on the use of metrics and quantitative indicators over the past twenty years and Cave et al provide a comprehensive summary of these (Cave et al, 1997, pp. 9-21). In stating that universities should be expected to work to clear objectives and to achieve “value for money”, the Jarratt report (CVCP, 1985) proposed the introduction of performance and other indicators for use by institutional managers. The National Advisory Body for Public Sector Higher Education (NAB) published a report by its Good Management Practice Group, which proposed a series of performance indicators on both resource management and academic operations for use in the polytechnics (NAB, 1987). From 1987 until 1995, the CVCP and UGC published annual “management statistics” for the universities, which consisted mainly of comparative costing data derived from annual returns (CVCP/UGC, 1987). The Warnock report, sponsored by PCFC recommended the development of metrics to be used in assessing teaching quality (PCFC, 1990a). In the same year, a group chaired by Alfred Morris undertook a detailed investigation into the potential use of performance indicators for institutional management but also to be published as part of an institution annual report (PCFC, 1990b).



The initial work of HEFCE in proposing systems of quality assurance and management did not directly involve the use of management statistics or performance indicators. It was the publication of the Dearing Report (National Committee of Inquiry into Higher Education, 1997) that provided the impetus for renewed interest in performance indicators. Among its recommendations was a further call for the development of performance indicators to enable assessments of the efficiency and effectiveness of universities in the delivery of higher education. In response, both HEFCE and the Committee of Vice Chancellors and Principals (CVCP) set up working groups and a number of reports heralded the introduction of sector-wide performance indicators. A group was set up by CVCP called the 'Higher Education Management Statistics Group (HEMS)', which produced a report on the topic (Higher Education Statistics Agency, 1999). As a prompt response to the Dearing Report, the HEFCE set up a 'Performance indicators Steering Group' that issued an interim report in February, 1999 (The Higher Education Funding Council, 1999a) followed by a more comprehensive response in December, 1999, with modifications in 2000 (The Higher Education Funding Council, 2000b).

In this latter report, the group proposed some initial indicators covering four areas:

- (i) Widening Access
- (ii) Non-continuation of students (retention)
- (iii) Projected outcome and efficiencies
- (iv) Research

with a suggested method by which the indicators can be moderated to take account of the differences between institutions resulting from the diversity of higher education. These are referred to as "Adjusted Sector Benchmarks" (The Higher Education Funding Council, 1999b) The data used as a basis for these indicators are drawn, as far as is possible from common sources such as the Higher Education Statistics Agency (HESA).

Performance indicators measure, either qualitatively or quantitatively, an object, unit or process in order to appraise it in terms of defined objectives. The Morris report provides a good general definition for performance indicators as

“statistics, ratios, costs and other forms of information which illuminate or measure progress in achieving the mission and corresponding aims and objectives” (PCFC, 1990b, p. 110).

Distinctions can be drawn between simple indicators, performance indicators and general indicators. Simple indicators were used by the old universities for a number of years under the name of management statistics (CVCP/UGC, 1987). Further classification of performance indicators into “internal” (graduation rates, progression rates etc), “external” (graduate employability, staff publications etc) and “operating” (staff-student ratios, unit costs etc) was later modified to the more conventional “input”, “process” and “output” categories (CVCP/UGC, 1986). Much of the literature concerns itself with this type of categorisation and definition, rather than about how the indicators were to be used effectively in a diverse higher education system. Such discussion is particularly important given that the essence of a performance indicator is some form of value judgement of what the standard or norm for that aspect of performance should be.

For the most part, consideration of quality assurance and of performance indicators has not been directly linked. Whereas the former has mainly been concerned with academic standards and the quality of the learning experience, the latter seems to have had its emphasis of the efficiency and effectiveness of institutional management. Some authors have attempted to provide the link.

Sizer states,

“Various PIs, not necessarily publishable, can be developed relating to... a teaching quality culture in terms of adequacy of provision (and)

quality of provision”(Sizer, 1989, p. 17).

However, commenting on the complexity and multi-layered nature of performance indicators, Sizer emphasises the importance of distinguishing between management information, statistical indicators and performance indicators. It is only the last that are geared towards the measurement of the achievement of objectives (Sizer, 1992, pp. 156-163). They tend to act as “signals or guides” to help make operational the theoretical aspects of quality, including efficiency and effectiveness. This gives the performance indicator added status in that it measures the extent to which the objectives of the institution are being met (Sizer et al., 1992 pp. 135-137).

On discussing the potential use of performance indicators in quality audit and assessment, Cave et al state

“PIs might have a range of functions...they might provide background or contextual information...they might be a distinct component of the judgments formed” (Cave et. al, 1997, p. 111).

The task of producing an acceptable set of performance indicators becomes more difficult as the range of factors affecting student learning increases. There is a further problem in reaching consensus on performance indicators because of their dual status; they are seen as both tools for institutional management and

“public expressions of relative performance” (Cave, 1997, p. 225).

McCulloch discusses the different uses of performance indicators, ranging from tools for achieving efficient and effective management to tools for self-assessment by teams of staff. The latter ties in with certain ideas on professionalism. Whereas the trained practitioner who adopts a “technical” view of practice may view performance indicators as a summative assessment of that practice, others may prefer the more formative assessment that comes

through reflective practice (McCulloch, 1996, p. 22). Allsop and Findlay feel that

“PIs constitute a contribution to the systematic organization of information that is needed to improve the quality of work in an institution” (Allsop and Findlay, 1989, p. 105).

Sizer discusses five uses of performance indicators, these being monitoring, evaluating, dialogue (in giving meaning to abstract concepts), rationalisation (to give coherence to policy) and resource allocation (Sizer et al., 1992, p. 137).

Rutherford emphasises the essential pre-requisites to the development of performance indicators for an institution as being a clear definition of the aims of that institution. He goes on to note that an increasingly diverse system (and hence institutional aims and objectives) makes it more difficult to develop common sets of performance indicators. The key issues are the purpose of the exercise, what to appraise and who should be responsible for the appraisal. Moreover,

“Whatever indicators of performance are eventually implemented, their value will still need to be determined by the usual processes of peer review which takes into account the particular context” (Rutherford, 1987, p. 100).

Consensus is important as Brown argues that regulatory systems need to be collaborative, involving the Government and their agencies and the institutions themselves (Brown 2004, p. 26).

Sizer supports this view and states,

“To be effective, performance indicators need to be owned by institutions...ownership is a necessary (but not sufficient) condition for

the development of a valid and useful set of performance indicators”  
(Sizer et al., 1992, p. 144).

Sizer goes on to emphasise the need for all parties to be clear of the nature and purposes of any performance indicators to be introduced as part of a system of quality assurance. He discusses “ten lessons” for governments and their funding agencies, which govern their introduction. Among these lessons feature the need for clear specification of the objectives of the scheme, the uses to which the indicators will be put, the conceptual basis for their development, and securing the ownership of the indicators by the institutions (Sizer et al., 1992, pp. 145-149).

In a paper looking at quality assurance systems in a number of different countries, Kells notes that countries differ significantly in their history and culture and it is therefore unreasonable to expect that uniform methods of quality assurance can be applied. In particular, the use of performance indicators are probably best suited to countries where there is a “high power distance” (a general acceptance of government-institutional hierarchy), high avoidance of uncertainty, and a “high masculinity” culture. He suggests that these may be features of the UK culture (Kells, 1999, pp. 224-227). By implication, performance indicators may be applicable to UK systems of quality assurance.

There are, however, a number of commentators who do not see obvious ways in which performance indicators can play a part in quality assessment. The Morris report acknowledged the widespread institutional concern about the use of performance indicators for quality assessment (PCFC, 1990b, p. 13). In discussing quality assessment and the use of performance indicators, Barneston and Cutright comment,

“the use of common PIs assumes institutions... are comparable. This may pressure institutions to generate common outcomes.... Which may

or may not be appropriate” (Barneston and Cutright, 2000, p. 286).

Kells is supportive of the use of performance indicators for internal institutional use but not for comparisons between institutions. He acknowledges the trends towards increasing imposition of quality assurance and control systems but expresses the hope that these will be increasingly geared towards institutional self-regulation. It is in this context that performance indicators may have a part to play (Kells, 1993 p. 8).

Cave raises questions about the validity of performance indicators due to developments in quality assurance systems based around peer review and “comprehensive and holistic evaluative frameworks”. There needs to be caution in attaching measures of quality that may not have a foundation in evidence or theory (Cave, 1997, p. 226). Kells agrees that the ability to monitor “true effectiveness of central teaching” and to “compare relative performance” through performance indicators is very limited and can tend to dampen enthusiasm for methods of improvement (Kells, 1992, p. 56). The use of performance indicators can lead to a preoccupation with the measure and “how to improve the score” rather than concentrating on how best to improve. This can have further adverse effects if higher rewards go to those scoring the highest (Kells, 1992, p. 86).

Yorke wonders whether the variables that have been proposed as a basis for performance indicators are appropriate with respect to the purposes of higher education, which are, in any case, difficult to define. He comments that it is

“extremely difficult - if not impossible – to improve the quality of the data to such a conceptual and technical level that a table of numbers which ranks UK universities...can validly be constructed” (Yorke, 1997, p. 71).

Ramsden argues that any performance indicator would be unsuitable to use on

its own, and that they can never be more than a guide to making decisions (Ramsden, 1991, p. 147). In the book written with Knight, Harvey argues that most attempts to construct performance indicators that are pertinent to learning objectives are too “crude” and act as “surrogates” for measuring teaching quality rather than learning, being based on things that are easy to measure (Harvey, 1996, p. 77). He goes on to claim

“...in the development of quality monitoring in Britain there has been a tendency to shift away from performance indicators and instead place far more emphasis on...statistical indicators (used) by peer review groups” (Harvey, 1996, p. 83).

Dill discusses the difficulties in the introduction of performance indicators in terms of costs. These are both the direct costs of introducing the scheme of measurement and the indirect costs of the resultant changes in behaviour that the system induces. These changes may stifle innovation and lead to further “emotional costs” due to adverse effects on those being observed (Dill, 1998, pp. 361-377).

In discussing Government services in general, Mintzberg expresses the general frustration over the use of indicators and metrics;

“Things have to be measured, to be sure, especially costs. But how many of the real benefits...lend themselves to such measurement” (Mintzberg, 1996, p79).

One of the stronger criticisms comes from Barnett who asserts,

“higher education is a developmental process of increasing intellectual maturity...given this view...it is difficult to see how PIs can be of any help” (Barnett, 1989, p. 38).

He comments on the fact that academic research appears to lend itself to the use of performance indicators but that teaching and learning does not; his reasoning for this borrows from Popper's three-world model (Popper, 1976 pp. 180-182, Pratt et al, 1994). Popper makes the distinction between

“thoughts in the sense of contents or statements in themselves and thoughts in the sense of thought processes belong to entirely different worlds” (Popper, 1976, p. 181).

Research is a product of the human mind and is in the domain of world III; the products of research and the outcomes of teaching and learning (assessments, essays etc.) can be measured and subjected to performance indicators. However teaching and learning as actual processes, fall into the realm of subjective experience and inhabit world II. It is difficult to see how we could

“peer into a student's mind to see what changes, if any have taken place” (Barnett, 1989, pp. 29-31).

Acceptability is an acknowledged problem;

“no-one has yet devised even a single PI that commands wide support amongst the academic community” (Johnes and Taylor, 1990, p. 185).

However, the main problem with the use of performance indicators in quality assessment is probably highlighted by Cave et al and provides a useful justification for the proposed line of research. Their view is that the development of valid performance indicators depends on agreement on the goals of higher education and that these have become increasingly contentious and political. Government has tried to move away from the academic definition of the goals to their own market and employer led definitions (Cave et al, 1997 pp. 104-105).



This research project addresses the issue by asking the interview subjects, at the outset, their interpretations of what constitutes a high quality student experience of higher education (the “desired future state”) (Warwick et al, 2000b). It is through moving towards consensus on this that the holon methodology proceeds in its development of performance indicators. This helps to overcome the problem discussed by Cave.

Performance indicators can be combined and presented in tabulated form in order to provide a way to compare one institution with another. A number of versions of these “league tables” regularly appear in the educational and national newspapers and this attempted use of performance indicators is regarded as even more controversial than their general usage (Kennedy and Clare, 2003, pp. 11-13). Yorke expresses the main concerns over league tables as being the validity of the formulation of individual indicators and their subsequent use with little or no qualification (Yorke, 1997, pp. 62-64). For example, an early version of the government's (then current) proposed measure of graduate employability was vigorously contested by vice- chancellors and the Education Secretary, David Blunkett (THES, 1999).

In common with the general debates on the use of performance indicators in higher education, the use of league tables have been controversial in the UK. The Times Higher Education Supplement in a leader article: "What counts cannot always be tabulated", commented:

"League tables are loved and hated - with reason. A spur to improvement, they are necessarily uncomfortable. They are also unfair, open to manipulation and do not measure vital aspects of university education such as inspiration, friendship and intellectual challenge."  
(THES, 1999).

Many of the indicators that are used in the preparation of league tables are also considered to be too coarse for this type of application and appear, in many

cases, not to have been properly thought through. Among examples of these are the staff-student ratio (SSR) and the number of first class honours degrees awarded. A low SSR could be considered a positive aspect in that, from the students' point of view it indicates more face-to-face contact between students and staff. On the other hand, from the taxpayers' point of view it could be considered to be negative because it suggests an inefficient use of resources. A university awarding a high number of first class honours degrees may be a highly effective institution providing a very high quality of teaching, or, alternatively, such an institution may be thought to have lower than average standards, because it is awarding firsts too cheaply.

One of the most difficult elements concerns the qualifications of students on entry to their course and the subsequent retention by the university of those students on their programmes of study. Institutions with a mission to widen access to higher education necessarily take on students with non-standard entry qualifications. The majority of these students are successful but they could be considered as a high-risk group because a number of them will not be able to cope with a full programme of study at the level of higher education. Such institutions are often penalised in league tables on both counts. They occupy a lowly position because the entry qualifications, when aggregated are less than institutions taking students with high grade A level passes and, because more of their students leave before completing their programme, they will find themselves in the lower reaches of the retention tables. Such a situation would be difficult to support because, in the absence of genuine measures of added value in education, success in adherence a mission of widening access and increased participation cannot be properly reflected (Kennedy and Clare, 2003, p13).

One of the causes of these difficulties is that league tables are based on the notion of a single view of the mission of a university; they necessarily assume that all universities and higher education institutions share identical aims and objectives. The choice of performance indicators and their weighting inevitably

contains a judgement on what the mission of a university is. This is compounded when the data from different sources is aggregated into a single table, as the weighting used in the aggregation is a further source of potential bias. *The Times Higher Education Supplement* comments:

"We would like to develop more tables so the diversity of universities shows more clearly. Instead, we are likely to be driven back to fewer as the half-dozen indicators being developed at the government's behest come to dominate all others." (THES, 1999).

### **Student Surveys**

Student surveys have been used on various occasions to measure student satisfaction at a course level, a programme level (including course experience questionnaires) or at an institutional level. There is currently a move to introduce a national student survey across institutions in the UK (HEFCE, 2004, pp. 1-29). Harvey cites five reasons for using student surveys. They demonstrate a commitment to students by indicating that their opinions are valued; they enable a focus on the learning experience; they can be a vehicle for continuous quality improvement; they can help in developing strategies to address issues of direct concern to students; and they can act as a benchmark if they are run in the same format over time. However, he goes on to point out that they are useful as a tool in the process of quality enhancement and not appropriate as a one-point performance indicator (Harvey et al, 1997, pp. 5-6).

Cave, however, does see the potential of student evaluation as a performance indicator because it is seen as the most direct way of evaluating teaching other than by direct observation (Cave, 1997, p. 147). Ramsden agrees that a performance indicator based on student evaluation would be "especially appealing" but notes that there are a number of difficulties in implementing such an indicator as a means of inter-institutional comparison, primarily the need for consistency in the questions and in the methods of distribution and collection of the questionnaires (Ramsden, 1991, p. 130).

King agrees that there is a benefit of surveys for students in helping the institution to develop strategies to improve the quality of the learning experience, but that they can also help students in their own professional development by engendering a view of a partnership with the staff in seeking continuous quality improvement. It is essential, however, that the objectives of the survey are made clear to students and there needs to be an emphasis on consistency of setting and administering the questionnaires (King et al, 1999, pp. 94 – 96). Murray agrees that evaluation by students can lead to improvements in the teaching that they experience for a number of reasons related to incentives for the staff. These include the general incentive for improvement in order to obtain higher scores as well as the possibility for the use of positive results in selection or promotion procedures (Murray, 1984, p. 122). In his paper about Course Experience Questionnaires, Ramsden comments on their usefulness in measuring differences between departments as part of a quality assurance process. However, they need to be designed to cover aspects of teaching quality that students are able to judge and have built-in protection against manipulation (Ramsden, 1991, pp. 129-130).

There are some concerns that have been expressed over the use of student surveys. Cave wonders whether characteristics of teacher behaviour or of course features can be linked to the quality of the student learning and also notes that the students' own performance can be linked to the quality of the experience (Cave, 1997, p. 150). He also notes that there is some considerable scepticism among academics of the validity of student surveys, since most are not based on rigorous research. The report of the Joint Performance Indicators Working Group reported that further research was needed on the value and effectiveness before course experience questionnaires could be considered as a candidate for comparative quality, although they could be of use within individual institutions (CVCP, 1995). King and his colleagues also cite scepticism among lecturers, especially if the surveys are seen as a “stick imposed from above”. They can lead to a loss of confidence, especially if the

results are at variance with the lecturers' own experiences, and if they point to dissatisfaction over areas where the lecturer has no control, such as resource allocation (King, 1999, p. 98).

Harvey comments that concerns have been raised over the validity of student evaluations due to the fact that they may be influenced by variables unrelated to teaching quality, such as class size and workload. There are also views that students may not be best placed to evaluate teaching quality at the time of study, and that evaluations tend to concentrate on narrow views of teaching rather than the wider concerns of learning (Harvey and Knight, 1996, p80).

Ramsden echoes these concerns, commenting that there would be difficulties in using course experience questionnaires as performance indicators because the responses can be confounded by such factors as the course design and the relevance of the material (Ramsden, 1991, p. 147). Murray argues that the most valuable feedback to staff, as part of a quality assurance process, would be formative feedback, but that, in contrast, most course experience questionnaires are summative. They should not be used in isolation and would need to be supplemented by other sources of data. This would militate against their use as a performance indicator. He also cites evidence that student evaluations "had reduced morale (among faculty) generally" and led to dissatisfaction with teaching. This dissatisfaction is compounded if the surveys are imposed without consultation, are interpreted in an overly mechanical way and are not backed up with an appropriate staff development system (Murray, 1984, pp. 123-127).

The literature indicates that, as with performance indicators, there are a number of concerns among the academic community over the use of student surveys. However, most of these appear to relate to the use of surveys alone as an indicator of the quality of a course or programme. Their use along with other indicators, qualitative and quantitative to help focus resources on quality enhancement may be more acceptable.

## **The Holon Planning and Costing Methodology**

Recent work by Bell et al (Bell et al, 1999, Warwick et al, 2000a, Bell et al, 2000,) defines an approach to higher education planning and control known as the Holon Planning and Costing Framework. The framework stems from some research into the limitations of existing methodologies for software process improvement (Bell et al, 1999, sections 5.1-5.3). The approach is rooted in soft systems methodology as described by Checkland (Checkland, 1981) but acknowledges the limitations of this methodology resulting from its lack of any metrication upon which to measure progress towards the declared goal. By proposing a combination of the soft systems approach with the Goal/Question/Metrication (GQM) ideas of Basili and Rombach (Basili and Rombach, 1988) these shortcomings are reduced.

The Holon Planning and Costing Framework (Warwick et al, 2000a, pp. 3-5) consists of four main stages. The first, Framing, is the identification and briefing of the stakeholders in the system under study, the definition of the problem situation and the main environment and framing holons. Holons are representations of the social situation encapsulating the problem. The second stage is Enquiry, which is the identification of the problem(s) as perceived by the stakeholders. It involves the drawing out, through fact-finding techniques, the stakeholders' understanding and definition of the problems to be solved. The solution to these problems can be categorised as essential or desirable.

The third stage is Metrication, which involves the application of the GQM methodology to the identified problems in order to assign metrics and define their collection. The metrics and the suitability of the method of their collection are validated by the stakeholders as part of this stage. The final stage of the process is Action and involves the use of templates to collect the metrics and store them for use by the organisation to inform analysis of past performance or to guide decisions on alternative courses of action.

The Holon Methodology was originally developed as a “post-mortem” tool to assist in identifying some of the problems associated with completed software development projects. The aim was to give development teams and their sponsors a better understanding of the process with a view to software process improvement. It was subsequently adapted to address some of the problems associated with higher education planning, prompted by the publication of the Dearing report (National Committee of Inquiry into Higher Education, 1997) and its expressions of a vision for higher education (Bell et al, 2000, p. 3).

The revised methodology, “the Holon Planning and Costing Framework”, supplements the framing and enquiry stages with a subsequent Vision stage. Here, the main problems that afflict the achievement of a vision of a desired future state are identified and prioritised as part of the interaction with the stakeholders. The problems are listed and transformed into identified goals and metrics are then developed to enable the assessment of the problem and the subsequent performance of the organisation in addressing its solution. Data is collected against these metrics and this enables the moulding of performance indicators through which progress towards the achievement of the goals of the improved system can be assessed.

The revised methodology was applied in a study of an academic department at London South Bank University in order to help the department define and develop its strategy. In doing this, the investigators used the methodology to help the stakeholders understand the systems and processes affecting the operation of the department and how these will be affected by the changes necessary in achieving the vision of the desired future. The research was timed to coincide with a formal review of the department and its strategic plans that was being carried out by the university, as part of a rolling programme of review. The review was undertaken by academics from other parts of the university, together with subject experts from outside the university and, in some senses, mirrored aspects of the system of subject review undertaken by QAA and HEFCE (Warwick et al, 2000b).

The application of the Holon Costing and Planning Framework led to the identification of many issues that were common to both the internal stakeholders and the review panel members. Indeed, the review did not raise any issues that had not emerged from the study. However, the study raised a number of issues that were not identified by the review panel (Warwick et al, 2000b, pp. 9-18) and its further application led to the identification of metrics that could be developed into performance indicators for use in helping the department achieve its vision.

One of the Holons identified was termed "Quality Management" (Warwick et al, 2000b, p. 18), but since the focus of the research study was on strategic planning and resource utilisation, detailed investigation of this aspect did not take place. However, there was sufficient evidence in the study and in the background research to suggest that the methodology could be adapted further to address the area of quality review and audit.

### **Issues Arising from the Literature Review**

One issue emerging from the literature is that, in the vast majority of cases, discussion of performance indicators is restricted to the assessment of the efficiency and effectiveness of institutional management. In a few cases (such as staff student ratios) a link with teaching and learning is suggested but most commentators who discuss the uses of performance indicators emphasise their use as management tools in attempts to improve the efficiency of operations in institutions (McCulloch, 1996, p. 22; Sizer et al, 1992, p. 137) or express the view that performance indicators are not applicable to teaching quality (Barneston and Cutright, 2000, pp. 281-286). However, there are authors such as Cave et al (Cave et al, 1997, p. 111) who have drawn links between performance indicators and their possible use in teaching quality assessment and this provides further justification for the research. A number of authors emphasise the need for all parties using performance indicators to understand



fully their purpose and context (Rutherford, 1987, p.100; Sizer et al, 1992, pp. 145-149) and the need for consultation and ownership of the metrics system (Brown, 2004, p. 144). I return to this issue when I set out my proposals for future development in Chapter 7.

A fair reflection of the literature is that the majority of authors question the role of performance indicators in quality assessment of the learning and teaching experience of students. Some worried about the difficulty in developing the indicators and the lack of quality of the available data (Yorke, 1997, p. 71), the lack of underpinning theory or evidence for their use (Cave et al, 1997, p. 226), the costs involved in their introduction (Dill, 1998, pp. 361-367) and the adverse effect their introduction can have on the academic staff (Kells, 1992, p. 56). Where there is support, it has the qualification that the performance indicators should be used in conjunction with other forms of assessment such as peer review (Harvey and Knight, 1996, p. 83) or simply as a guide to be used in the decision making process (Ramsden, 1991, p. 147).

In this area, higher education appears to differ significantly to other industries and sectors because links between performance indicators and “product” or “service” quality are often a significant feature of those industries and sectors. It may be that higher education is so specialised that this is more difficult or that the appropriate tools have not been available until now.

The literature review strengthened the case for the use of the holon methodology. The methodology starts from seeking the interviewees’ desired future state in terms of teaching quality, thereby firmly focussing on the issue I wished to investigate; the quality of the student experience as opposed to institutional efficiency. It focuses still further on those aspects that can lead to metrics and it arrives at those metrics through consensus. In this way it addresses many of the criticisms of performance indicators reported in the literature. This approach has not been undertaken previously and consequently,

the set of metrics produced differ from those produced by previous studies and projects.

The literature review focused on quality in higher education. This involved looking at the common notions of quality in other types of organisation including the issues of “fitness for purpose” and “conformance to specification” and the extent to which they were applied in higher education. The literature indicated a willingness to import terms such as “fitness for purpose” from other sectors and industries but that they were often mis-applied. This justified exploring the use of such terms in higher education more closely to see whether they were in fact being used in the correct way.

There was a richness of the source material from areas outside higher education, and an appropriate balance has been struck to enable a reasonable comparison between the higher education environment and the forms of quality systems in operation in other industries. A number of clear and concise descriptions of the notions of fitness-for-purpose, conformance-to-specification and related quality issues were found in the non-higher education literature (Hill, 1991, p. 369; Hughes and Cotterell, 1999; Voss et al, 1985). The term “fitness for purpose” did occur in the higher education literature, with descriptions that partly aligned with those used in other industries (Clark, 1997, p.223; Harvey and Knight, 1996 pp. 5-7; Brown, 2004). However there was evidence of some confusion over the use of the term (Brown, 2004, pp. 86-88) and indeed some of the comments assigned to fitness for purpose would probably have better been described as conformance to specification (Harvey, 1994, p6, Brown, 2004, p. 329). I was conscious of this issue in the development of my questions during the interviews and I return to it again in my conclusions in Chapter 7.

There has been a significant amount of commentary in the literature on student surveys as a way of determining a view on the quality of the student experience. This includes general student satisfaction surveys at institution level (Harvey et

al, 1997) and more specific surveys at programme level (Ramsden, 1991). Many authors comment on the potential benefits for students in the form of possible subsequent quality improvements (King et al, 1999; Murray, 1984, Ramsden, 1991) and even as a potential performance indicator (Cave et al, 1997, p. 147). However, others express reservations about the use of student surveys in this way (Ramsden, 1991) and, especially if they are proposed as a means of inter-institution comparison (CVCP, 1995). There is also evidence of reluctance to accept student surveys as a valid tool in quality assurance by sections of the academic community (Cave, 1997, King, 1999 p. 98). In addition to these concerns, there have been doubts expressed over their validity and value due to the presence of factors that may confound the quality experience (Ramsden, 1991, p. 147), due to them having too narrow a focus (Harvey and Knight, 1996, p. 80) or because of the adverse effects they may have on academic staff (Murray, 1984, pp. 123-127). In response to this I decided to allow the ideas on surveys as one of a possible set of indicators to develop as part of the enquiry and metrication stages of the project.

Because this research project was not focussed on a particular methodology or on existing performance indicators, QAA and HEFCE focussed research has been kept to a minimum. However, there were some useful contributions to the general debate from these sources. In particular, the now defunct HEQC produced publications on the conduct of academic audit, which were useful additions to the literature review.

As stated above, a positive result of the literature review was the conclusion that the Holon planning and costing framework is a suitable vehicle for the proposed research. One of the studies by the researchers at London South Bank University compared an exercise on their own School using the methodology to analyse and review the strategic plans of the School. While this research was being undertaken, the university was conducting its own review of the School as part of its internal monitoring procedures. One of the main conclusions was that the Holon methodology identified the same issues as (and many more than)

the review. Consequently, the methodology provides a viable framework within which the research project was set and, in addition, it may be a potential tool for use in other studies of quality assurance in higher education.

The analysis of the literature review provided further support and justification for the research. There had been a number of previous attempts to introduce performance indicators into systems of quality assurance and audit. These had met with varying degrees of success. However, the fact that there had been previous attempts confirmed to me that the research project was still very relevant in adding to knowledge and practice in the area.

The debate on performance indicators highlighted a number of significant criticisms of their use in higher education. Some of those criticisms related to the inappropriateness of the indicators previously suggested, their lack of focus on the quality of the student experience and the lack of consensus among the users. One of the conclusions that were suggested was that it might have been the absence of appropriate tools that prevented researchers further developing the links between performance indicators and teaching quality. One of my aims, therefore, was to explore whether the Holon methodology may just be that missing tool. The holon methodology enables these issues to be addressed as noted above. As a result, I was able to confirm the use of the holon methodology as the main research tool.

The review examined the potential for the methodology on this project by analysing the way that it has already been used in domains that were different from its home domain of software engineering. As a consequence, I had greater confidence in the ability of the methodology to cope with the domain of the quality of the student experience of learning and teaching. It is a tool that has never before applied to this area and it produces a uniquely focussed set of performance indicators. The next Chapter describes how the methodology was applied in this project.

## **CHAPTER 3: RESEARCH METHODS**

The research project is mainly a qualitative study (Atkinson, 1993). Although it deals with the application of performance indicators to quality assurance, which is, itself, a form of quantification, the research focuses on the potential for the use of quantitative analysis. It investigated attitudes of a variety of stakeholders in higher education, including academics, students, reviewers, institutional managers, and other actors in the quality assurance process. It also used the Holon methodology as a basis for the development of relevant performance indicators to support academic review and, in the process, determined whether there may have been potential for further use of the existing sets of indicators.

### **Soft Systems Approach**

The underpinning research methodology of the project was based on the soft systems approach developed by Peter Checkland and colleagues at the University of Lancaster in the 1970s (Checkland, 1981; Checkland and Scholes, 1990; Wilson, 1990). Until that time, most attempts to analyse complex systems used methodologies that were grounded in “hard” engineering problems; those where the objectives of the system were well defined and unambiguous and the analyst could concentrate on how the system operated. Checkland’s team noted that many problem situations occur where the objectives are not clear and where there is at best a feeling that something is not quite right and needs to be improved (Checkland and Scholes, 1990, pp. 13-20). In particular, the group of systems where these difficulties were particularly obvious were Human Activity Systems, which can be thought of as a set of systems and subsystems of activities together with a social system (Wilson, 1990, p. 28). Any area of management activity or any system largely depending on people as an integral part (such as a university) falls into this category.

Indeed, Checkland applied the thinking around the new methodology to the identification of the difficulties of social science research when compared to the natural sciences. These difficulties included the fact that any generalisations are necessarily lacking in precision because of the variety of possible interpretations of social phenomena. Human beings are a component of the system under scrutiny and there is an inherent problem in making predictions of social events because of the existence of freedom of choice among the participants (Checkland, 1981, pp. 68-70). The approach taken by the researchers was a form of Action Research (Kemmis, 1993, pp. 177-179) in that they attempted to apply hard systems methodologies to human activity systems and use their (failed) experiences to mould the methodologies into the emerging soft systems approach (Checkland and Scholes, 1990, pp. 16-17).

There is a difference between defining a human activity system as a system with the implication that the objectives of the system are known and unambiguous and merely thinking of it as a system. Humans can, to an extent, “withdraw” from the real world of the system and think about it. But in doing so they see the world through their individual intellectual filters that allow them to interpret what they see and these filters have themselves been constructed by the individual’s experience of the real world. As a result, the notion that there can be universally agreed objectives of a human activity system or a single correct “solution” to perceived problems with it may be flawed (Wilson, 1990, pp. 3-8).

As is the case with engineering, a system can be thought of as a transformation process. However, there are likely to be multiple perceptions of a human activity system and therefore the interpretation of any task, objective or problem is also subject to multiple perceptions. Human observers all have their own view of the world, which enables them to attribute meaning to what they see. As a consequence, what is being modelled is not necessarily what exists but a view of what exists, or even a conglomeration of views (Wilson, 1990, pp. 32-34). The best that can be hoped for is that we can build a conceptual model

of the system in order to try to understand the area of concern and to help define any structure and logic so as to be able to suggest some areas of improvement. We need to think of the human activity as a whole or “holon” (Bell et al, 2000) that has layers, emergent properties, communications and control (Checkland and Scholes, 1990, pp. 22-24).

From the notion of the holon the concept of the "Rich Picture" was introduced as part of the soft systems methodology. The soft systems approach starts by taking a particular view of the system and incorporating subjective impressions into a rich picture of the system, that includes the people involved, the problem areas, sources of conflict and other human activity aspects of the overall system. It looks at elements of structure, boundaries and activity types and at the processes themselves. From the rich picture, the primary tasks and issues and matters of concern (e.g. bottlenecks) can be identified. A "root definition" is then formed about the system that proposes improvements to the system to tackle the problems identified in the rich picture (Avison and Wood-Harper, 1990, pp. 45-48). Various conceptual models of the new system can be built from the root definition and these can be compared and evaluated against the problems in the rich picture. A set of recommendations is then suggested to deal with the specific changes that are necessary to solve the problems. These are evaluated in terms of feasibility and used to propose specific remedies for action.

### **The Holon Methodology for Planning and Costing**

The holon methodology is firmly rooted in soft systems methodology but acknowledges the limitations of this methodology. These limitations stem from its lack of any metrication upon which to measure progress towards the declared goal. By proposing a combination of the soft systems approach with the Goal/Question/Metrication (GQM) ideas of Basili and Rombach (Basili and Rombach, 1988) these shortcomings are reduced. The GQM approach is an attempt to develop quantitative measures for aspects of software quality. The

first step in the process is the identification of a particular goal; for example whether one particular development tool is more effective than another. Having identified the goal, a number of questions are formulated to test whether the goal is achieved. So, for example, questions about the speed of development, the number of developer-hours required under each tool and so on. The final stage uses the questions to identify a number of metrics or measures that need to be collected and presented in order to answer the question (Hughes and Cotterell, 1999, pp. 257-258). Although the GQM approach has been described in terms of its original domain, software development, the holon methodology has adapted it and demonstrated its effective use in the study of higher education management (Bell et al, 2000).

For this reason, the holon methodology was used as a framework for the research and in the analysis of the findings. Its role was to derive any appropriate performance indicators that may have emerged as possible contenders for the improvement of the academic review process through the progressive focussing of the information elicitation. It was not possible to use all the stages of the holon methodology. The final stage, known as “action” could not be undertaken within the timescale of this research project. The reason for this is that the project aims to develop appropriate performance indicators that may be used to improve the process of academic review. The full testing and calibration of the resultant indicators would take at least two cycles (in most cases two academic years) and this is clearly beyond the scope of this project.

The application of the methodology helped to keep the interviews on track and its value was in facilitating the emergence of performance indicators from the discussions on quality assurance and academic review. The research project was about the possible use of appropriate performance indicators to improve academic quality review and the role of the holon methodology within the project was that of a (very promising) tool to be used.



This approach can be thought of as a problem – trial solution – checking and error elimination – new problem approach; a process of successive refinement. The knowledge gained from the refinement of the definition and articulation of the vision can be thought of as “growing through trial and error elimination” (Popper, 1976, p. 115). In this way it accords with a Popperian approach as described by Pratt et al (Pratt et al, 1994). Indeed their view that

“Popper doesn’t expect people to be objective but requires inter-subjective testing to check each individual’s necessarily subjective experience”(Pratt et al, 1994, p. 37)

is a good description of the process.

### **The Researcher’s Role**

Throughout the research project, the system of academic review was in a considerable state of flux and the publication of performance indicators was recent, and had yet to become an established part of the higher education environment. Consequently, the research assessed the extent to which these indicators and the different strands of the emerging quality environment (academic review proposals, benchmarks, codes of conduct, qualifications frameworks, programme specification and performance indicators) could be drawn together. This involved a literature review to assess any existing or potential linkages and part of this included looking at different views of quality assurance and audit in higher education. In addition to this, the research undertook further searches of the relevant literature to analyse the effectiveness of various forms of quality assessment and performance measure in other parts of the education sector and in other areas of business and industry.

After starting on the project, I was invited to become a QAA academic reviewer and, subsequently, an auditor. This means that I was able to take an “insider” position and adopt the role of participant (Lacey, 1993, p.124), engaging in a form of action research (Lomax, 1994) to try and analyse and adjust my own

approaches to the review process. This provided the opportunity for a more unique insight into the quality assessment processes, although it was important to ensure that the research remained unconstrained by any particular system or methodology.

The main tool for data collection, as set out in the description of the holon methodology, is the interview. This form of data collection does have disadvantages, primarily due to the lack of control of subjectivity in collecting and recording data on the part of the interviewer. Coupled with this is the added danger of carrying that subjectivity through to the analysis. It is also not always advisable to rely on just one form of data collection (Nias, 1993, p. 160).

However, interviews are a simple and time-efficient method of data collection and, crucially, the collection of data by interview is dictated by the methodology chosen for this research. Interviews are used to guide the respondents towards the definition of aspects of the “desired state” that can be moulded into performance indicators.

Initial interviews with a small group of stakeholders were used to ascertain whether there were any problems with the viability of the research. This group was also used as the knowledge base for the “framing” part of the Holon methodology. The interviewees were selected from the staff of my own university, London South Bank University. The reason for this was two-fold. Firstly, both time and budgetary constraints on the project prevented me from making a wider trawl for a group to use in the forming stage. Secondly, the fact that I was known to the group meant that it was more likely that their responses would be truthful as often the interviews are likely to be of higher quality if the interviewer is part of a longer term engagement with the group (Walford, 1991, p. 97).

Further people were recruited, from a range of institutions in the London area, to provide their views as part of the enquiry and metrication stages of the project and a selection of these were used in the successive refinement of the

knowledge gleaned and in the metrication stage. A total of three senior academics/institutional managers, eight academic members of staff and two non-academics, all of whom had experience of quality management and enhancement, were involved in this part of the research. The sample of people was selected using a stratified approach to try and ensure a reasonable mix of subject expertise. It needed to reflect a mix of expertise (i.e. length of experience in various assessment and/or audit roles), of institutional background and of subject specialism. The views of students were sought and this was undertaken via small group discussions. There was also some consultation with members of the systems dynamics group at London South Bank University to discuss the methodologies used in the development of performance indicators.

A summary of the interviewees used is as follows.

Framing Stage

Participant	Gender	Role	Subject Expertise
A	F	Professor	Sociology
B	M	Principal Lecturer	Applied Biology
C	M	AS cttee Chair	Politics
D	M	Dep. Dean	Chemical Eng.
E	M	HoD, Quality Unit	Food Science
F	M	Head of School	Computing

Enquiry Stage (Staff)

Participant	Gender	Role	Subject Expertise
H	F	Pro-VC	Maths
I	M	Registrar	Mod. History
J	F	QA Officer	Management
K	M	Pro-Dean	Accountancy
L	F	Principal Lecturer	HR Management
M	M	Head of Dept	Metallurgy

N	M	Professor	Info. Technology
O	M	Head of Dept	Engineering
P	M	Pro-Dean	Business

Enquiry Stage (Students)

Participant	Gender	Role	Subject Expertise
Q	M	pre-92 university	History
R	F	pre-92 university	Geography
S	F	FE College	Org. Behaviour
T	M	FE College	Computing
U	F	post-92 university	English
V	F	OU	Art History

All interviews were individual and semi-structured (Wragg, 1994, pp. 271-273). Because of the different experiences and perspectives of the interviewees, a standard set of questions was not appropriate. Where feasible, the interviews were tape-recorded, and where this could not be done, the data collection was achieved through comprehensive interview notes (Nias, 1993, p. 135).

The research aimed to determine a “vision” or “desired state” for higher education (or more realistically an institution or an academic department) that, by definition provides a quality student learning experience. As noted above, it used interviews with a variety of stakeholders as part of the application of the holon methodology. The process was necessarily subjective in that the vision of each interviewee will need to be drawn out and amalgamated with the views of others. As each “mini-vision” was articulated, it was tested with further interviewees and represented back in the form of checking (via the rich picture and other techniques) through follow-up interviews.

The adoption of the holon methodology determined specific stages through which the investigation progressed. My role was to manage those stages and

steer the project so that the appropriate forms of information were gathered at each stage and then to analyse the findings of each stage. The stages of the methodology are discussed in greater detail in the following Chapters.

## **CHAPTER 4: THE FRAMING STAGE**

Part of the framing stage was to test the feasibility of the proposal outlined above, and to pilot the first stage (framing) from the holon methodology. A brief discussion with a senior reporting assessor had suggested that the area would be appropriate for investigation, as there did seem to be a general lack of awareness among reviewers of the role and nature of performance indicators. Where reviewers did have some knowledge of performance indicators, there seemed to be some confusion on how they integrate with any of the current proposals for, or indeed past systems of quality assurance and audit and with the codes of conduct and with subject benchmarks. He also acknowledged that the issue of the subjectivity of the processes adopted by QAA was frequently raised by institutions and that he thought that this was one of the main weapons being used by the Russell group in their attempts to modify the remit of the QAA.

One of the aims of the research was to provide information on the relationships between the different views of quality assessment and audit and their relationship with the use of performance indicators. The research project involved an evaluation (Rogers and Badham, 1994, pp. 101-105) focussing on the different views of the quality of teaching and learning in higher education and on the potential for performance indicators in assessing that quality. The research project involved collecting data from a number of other stakeholders concerning their knowledge of and opinions on what constitutes a high quality experience of higher education, and interviews were proposed as the method of eliciting these views.

The framing stage involved conducting semi-structured interviews with five senior members of academic staff from London South Bank University and one from another London university. Pressures of time and resources dictated that

the sample was drawn mainly from my home institution and there could have been a danger of bias in this sample. However, the stage formed part of the initial “framing” of the problem (Bell et al, 2000, p. 10) and care was taken to select people from different academic backgrounds in an attempt to pick up as wide a range of views as possible. The sample for the interviews included experienced and recently trained QAA reviewers. It also included people who had been involved in the QAA subject benchmarking groups, staff with a specific “quality assurance” remit within their job description and a member of staff with a considerable amount of experience with professional body accreditation and monitoring. They were chosen for their general views of quality in higher education, rather than their views of whatever the CNAAs, HEFCE or QAA approaches they have been involved in.

The members of staff selected for interview were as follows.

A: A senior academic, who has experience as a HEFCE subject specialist reviewer, was a member of the benchmark panel for Sociology, has a range of external examiner experience, and was a member of the CNAAs register for validation and review.

B: a principal lecturer and Head of Division with experience as an external examiner and HEFCE subject specialist reviewer in biology.

C: a principal lecturer, HEFCE subject specialist reviewer, Chair of the Humanities Faculty Academic Standards Committee and Institutional Facilitator for QAA subject reviews.

D: a principal lecturer, a HEFCE and QAA subject specialist reviewer, member of the benchmark panel for Chemical Engineering and with considerable experience of accreditation definition and practice with the Institute of Chemical Engineering.

E: a principal lecturer, HEFCE and QAA reviewer in Food Science, lead for his department during a recent QAA review of biosciences and an institutional facilitator. Has been appointed as Head of the recently established Academic Quality group at London South Bank University.

F: a Head of School at a (new) university in London. Recently appointed as a QAA reviewer in computing and has 15 years experience of accreditation with the British Computer Society, including being Vice-Chair of examinations and assessment.

The interviews were semi-structured with the interviewer asking broad questions on the topics indicated in Appendix A, but allowing the interviewee to take the discussion of the individual topic in the direction best suited to their particular experience. This “freedom” is an essential part of the framing phase of the holon methodology in that it allows interviewees to frame their view of what is (and is not) important in quality assessment. Extensive notes were taken and, where necessary, follow-up meetings were arranged if points of clarification were required. The interview notes were analysed, firstly along the topic lines of the broad topics in Appendix A and subsequently into the more general categories of

Quality in UK Higher Education

Quality Assessment and Audit in Higher Education

Performance indicators

The reason for this categorisation was to enable the views of the interviewees to be compared and contrasted with the analysis of the literature review.



## **Analysis of the Framing Stage**

### *Quality in UK Higher Education.*

Most of the interviewees were of the view that the quality of the student experience is generally viewed as the most important aspect for quality assessment and audit to concentrate on. A commented that this has, perhaps not always been the case and that, in some institutions, quality may have been regarded in terms of just the curriculum. However, the activities of HEFCE, HEQC and QAA have led to some change in attitudes. This notion of the quality of the student experience broadly equates to the industry definition of “fitness for purpose” or, according to C, the “engineering model”, where the purpose is a university level education. However, A pointed out one of the difficulties in using the direct comparison, by comparing education with health; a “good” university education (as with effective health care) is not always possible to acknowledge until some time after its completion.

C pointed out that other stakeholders, such as the employers of graduates, the professional bodies and, increasingly, Government agencies, may be more interested in aspects of “conformance to specification” in a service delivery/customer care sense, and this aspect of adherence to benchmarks or professional body requirements may be especially important. It is in this area that D, E and F pointed out that differences between subject disciplines, especially “vocational versus non-vocational” may become important. Many of the science and engineering disciplines had their programmes of study structured towards the needs of specific careers, such as computer systems analyst, civil engineer etc. especially for the first destination post on graduation. Very often, these posts were also part of a career structure recognised (and often heavily influenced by) the relevant professional body. The result was that,

for a number of years, there have been informal benchmarks in these subject areas and the notion of “conformance to specification” is not as novel as in other disciplines.

A further difficulty with measuring the quality of the student experience may stem from the difficulty in managing the students’ expectations. Students from backgrounds where higher education has not previously featured may have their expectations shaped in such a way that it is not possible for the institution to meet them. This can range from students expecting everything to be like “Morse’s Oxford” (interviewee C) to being unaware of the need to manage their own learning (B). C went on to comment that this was a problem likely to become more acute in the future. Current Government plans include significantly increasing the participation of 18-30 year olds in higher education. This will be targeted to those groups with a traditionally low participation rate and these are primarily those from the lower socio-economic groups, who are unlikely to have many contacts in their social circle that have had experience of higher education. Unless universities are aware of this and can find ways of managing these students’ expectations, disappointing student experience may become more widespread.

Three of the five interviewees stressed the importance of involving non-academic departments and units in any quality assessment or audit. This has not been a major feature of previous systems of review but it can affect the student experience directly, through students’ bad experience with timetabled accommodation or finance (C) or indirectly. This can occur when members of academic staff have unhelpful contact with non-academic departments and this can affect the teaching service that they provide. This could either be because the academic has been unable to obtain required teaching facilities or equipment, resulting in a reduced quality of lecture or tutorial, or because of a difficulty resulting in the member of staff being unhappy and consequently not performing to his or her best (E).

## *Quality Assessment and Audit in Higher Education*

All of the interviewees acknowledged that some benefits had accrued as a result of the introduction of quality assessment and audit in the 1990s. This was mainly the result of departments having to tighten up their procedures in the face of a forthcoming audit and in particular ensure an adequate flow of information to their students. E specifically mentioned that the development of comprehensive course and module guides for issue to students at the start of their course and improvements to the internal moderation of student assessments could be seen as a direct beneficial result of preparing for, and experiencing subject review. These improvements generally stayed in place after the review was complete and were often supplemented through the dissemination of good practice from other institutions.

One alternative view emerged with F wondering whether, after all the effort put into assessing quality, we were that much better at delivering higher education. He observed that an enormous amount of time and effort had been spent in preparing documentation for subject review and in “rehearsing” the teams in a number of institutions. In many cases, this was time and effort that may have been better spent on improving teaching and learning. F also commented on the various past attempts at quality assessment through CNAAB, PCFC, HEFCE and QAA, which seemed to result in continual revisions of rules and procedures with the only obvious results being “extra hurdles for the institutions to jump”.

All of the interviewees, however, raised the point that the approaches tried so far failed to take proper account of the diversity of higher education and the often very different missions of individual universities. Attempts to mitigate this by providing review teams from a variety of backgrounds often backfired because of the reluctance of staff in some universities to take advice or criticism from review teams containing members from what they regarded as “lesser” institutions (A). There was also the view expressed that, despite the training given, it was difficult for a reviewer who had spent their working life in a

traditional university in the Shires to comprehend fully the mission and the clientele of an inner city new university. Similarly, the reviewer from the new university would have similar difficulties when reviewing a traditional university.

There was also concern expressed that QAA and HEFCE subject review did not involve any subsequent dialogue, where reviewers could expand upon any comments and the evidence that they thought supported those comments (A). She drew attention to the validation model used by the CNAA where panel members knew that they would be required to engage in discussion with the course team after their judgement had been made. This enabled the team to gain a better understanding of the weaknesses in their case and to get advice on how to correct those weaknesses.

C felt that it was often possible for reviewers to detect things like low morale among the institution staff. He had seen institutions where the organisation seems to have been in a constant state of flux or where members of staff feel that they are not employed so as to exploit their talents in the most effective way. Reviewers often glean these impressions indirectly and, if so, it may influence their judgement.

B commented that in most cases there was still confusion over the extent to which quality assurance methods should guarantee standards (at a threshold) or strive to judge equivalence of institutions. Even the development of benchmarks and programme specifications may not help because they are either too general in order to cope with the diversity of institutions or there are attempts to “narrow things down” so much that prescriptive descriptions of topics result that are in danger of becoming rapidly obsolete (D). B was critical of the benchmarks because the groups that developed them appeared (in his area) to be dominated by input from the more traditional universities. Consequently, the groups regarded them as a “gold standard” in the same way

that A level syllabuses are regarded and they suffer from the same deficiency of not giving due recognition to the applied aspects of their subjects.

F thought that the systems that have been used in higher education do not really look at the quality of the product or the service (the student experience) or even at the processes behind those services. They seem instead to concentrate on the paperwork behind the processes.

Three of the interviewees specifically mentioned the importance of the Chair of the review panel in keeping a sense of proportion and ensuring that all assertions were backed by evidence (B) and in ensuring that individual team members adhered to the rules of the process (D). C commented that having an effective Chair of a review panel is of particular importance. A key part of the role is to be able to “get at what the real issues are”. They must also be able to control the “rogue” reviewer who simply does not seem to grasp what is going on.

One thing that is difficult for Chairs and team members to assess is the extent to which the view of the organisation seen by the reviewers can be manipulated or stage-managed (C and D). D was dubious of much of the process and felt that better coordination of institutional review with professional/statutory body reviews and accreditation visits would be a better way forward. F echoed these views commenting that under the current systems, a totally false picture could be presented to reviewers and this was one of the main differences between the quality assurance procedures in higher education and elsewhere. B thought that the only real way of judging the quality of the education that the students were receiving was to sit in on or even to conduct (as an outside reviewer), tutorials in the subject area.

Although peer review has been the cause of much of the criticism of previous quality assessment and audit methodologies, all the interviewees saw it as necessary. Although the views of qualitative versus quantitative review differed

among the interviewees, all acknowledged that there were aspects of assessing the student experience that could only be done through peer review. They also acknowledged that this was the main vehicle by which dissemination of good practice occurred.

The interviewees differed in the extent to which they thought that bias could affect the judgements being made due to the necessary experiences of institutions and methods that the reviewers brought with them. Two of the interviewees felt that the professionalism of the reviewers was such that, in the vast majority of cases, objectivity could be obtained by overcoming any risk of bias due to their own institutional experiences (A and D). However, other interviewees felt that the problem may be quite real in that reviewers “cannot get away from their own perception and view of the institution” (E) or that they carry enormous amounts of “baggage” including old versus new university bias or theory versus applied bias (B).

### *Performance indicators*

There were quite mixed views on the current or perceived future effectiveness of performance indicators as part of academic review. A saw a place for metrics but only if used with qualitative qualification. C also felt that they were best used to highlight a possible problem for further investigation rather than as grades to be awarded. D commented that both continuous and discrete metrics had their place if they had unambiguous definitions. But there were limitations and most of the time they would need to be supplemented by qualitative commentary.

Again the issue of the diversity of institutions and their missions was raised as a potential problem as it would indicate different criteria to be used (B). Some attempts to moderate the HEFCE performance indicators, such as the use of postcode as a proxy for “social class” have been severely criticised and discredited (C) and more reliable and rigorous methods of moderation need to

be developed (E). Too many of the performance indicators currently being promoted are based on the standard three-year full-time undergraduate model and this model is becoming increasingly obsolete, particularly in new universities. Percentage retention or completion rates are still pegged to a notional completion time of three years for a full-time student. This is too crude a notion especially when, in some universities the three-year, full-time student is a dying breed (D).

With some of the standard performance indicators or “management statistics”, such as money spent on administration per FTES, it was difficult to see how this could be related to quality because it did not measure the effectiveness of that administration (A and C). Indeed, one apparently obvious method of moderation (funding per FTES) has not been used (E). Other metrics that could be developed to measure the quality of the education provided were (as with the issue of health mentioned above) long term. In other words, it may be the type of employment or contribution that a student is making to society five to ten years after graduation that is a measure of the quality of the degree course (A).

There was general support for the definition and use of “value added” as a performance indicator (B, C and D). Although difficulties in developing such an indicator were acknowledged, not least of which was the definition of the input measure, it was felt that, in a diverse higher education system, such a measure was of such importance that its development should be a priority.

Views differed as to whether performance indicators should be made widely and publicly available, risking crude and inaccurate interpretation into league tables as opposed to informed analysis, or whether they should remain confidential to the institution and risk accusations of lack of transparency. However, the more that performance indicators are used, the greater the danger of institutional behaviour being changed in order to produce a better score as opposed to a better student experience (A). The research assessment exercise is often accused of a similar effect. F felt that for much of the time, the higher

education community seemed to be “chasing performance indicators” and there was a danger of them becoming the end in themselves and not the means to the end.

### **Conclusions from the Framing Stage**

The interviews were conducted in the context of the Framing stage of the holon methodology. The aim of this stage is to attempt to define the problem situation and the main areas or environments surrounding the “problem” (i.e. the assessment and audit of quality in higher education). As well as providing the basis for the subsequent stages of the methodology, it also allows the testing of the topic areas for interview to see whether they are sufficiently clear to the interviewees. A number of conclusions could be drawn from the framing stage.

It seems that both of “industry’s” views of quality (fitness for purpose and conformance to specification) have a place in higher education. The latter is being directly tackled through benchmarks, programme specifications and codes of practice. Discrete performance indicators (i.e. yes/no) can be used to assess this based on fairly objective criteria. It is the former that proves the more difficult in that its proxy, the overall educational experience of the student has less obvious scope for metrics. It is further complicated by the issue of the management of (unrealistic) student expectations. Indeed, quality assurance processes can result in the exacerbation of this problem. For example, “high” scores result from a diversity of assessment methods in most subjects.

However, in many cases, a student from school or college has, in some subjects only been exposed to a limited range of assessments. The QA process can be said to contribute towards an uncomfortable student experience for some students. Although the notion of the different types of customer was not commented on directly, its effect was apparent during the interviews in discussions on both fitness for purpose and conformance to specification.



Until recently, there appear to have been ambiguities in the higher education community view of adherence to standards. As discussed above, these are being addressed via benchmarks, specifications and codes of practice. However, there are still questions of whether these cater for the diversity within the UK higher education system. It is also the issue of diversity that causes many of the criticisms of past methodologies, from the point of view of the criteria being assessed and the composition of the teams of assessors. There is a need to ensure that any system of review, particularly one involving qualitative analysis and judgement has mechanisms for backing up those judgements with evidence and, possibly, allowing follow up dialogue. Appropriate performance indicators may play an important role as some of that evidence.

Despite the criticisms, peer review has to be part of the process of quality assessment for some aspects of the educational experience of the student. If more acceptable performance indicators can be introduced into the process, it may be possible to use existing mechanisms, such as external examiners or professional body accreditors to undertake any remaining peer review. Peers will always have “baggage” in the shape of pre-conceived ideas and experiences and there is a need to rely on their professionalism to overcome this.

There is scope for the use of discrete and continuous performance indicators, either as measures in their own right or to lead and direct subsequent discussion or investigation. However, there must be standard definitions of the statistic and the data sources and there has to be rigorous and reliable methods of moderating the indicators in order to overcome the problems resulting from institutional diversity. There remains the difficulty in measuring some aspects of fitness for purpose, particularly where some of the benefits may not become apparent until some time after the student has left the institution.

The results of the interviews do not, at first sight, appear very structured nor do they immediately suggest areas for emergent performance indicators. However

that is the nature of the first stages of the use of the holon methodology. Framing is about eliciting the broad views of the participants. The areas where quality assessment applies in higher education were identified by the interviewees along with the difficulties of assessment in those areas. It is these areas around which the next set of interviews will be based

An interesting issue emerged during one of the interviews. It is the issue of managing student expectations. As long as the emphasis of academic quality review remains focussed on the student experience, then the expectations of the student on entering higher education are bound to influence how they feel about the service they are receiving. Anyone arriving at an inner London new university expecting it to be like “Morse’s Oxford” is bound to be disappointed. This area of “managing the expectation” of students was not an issue that had been anticipated when the research was first proposed. However, it would be likely to have an impact, which could become more exaggerated with the adoption of some performance indicators and so the issue was carried forward during the enquiry stage.

An attempt was made to see whether any significant differences could be detected in the attitudes of the interviewees towards quality assessment and audit that may reflect their subject specialisms. Broadly, the framing stage study consisted of interviews with two humanities academics, two sciences and two engineers. One hypothesis may have been that the engineers, and possibly the scientists may be more comfortable with the idea of metrics and performance indicators than the colleagues from humanities. From the interviews, there was not sufficient evidence to support this hypothesis although there were some discernible commonalities. For example, both engineers cited the benefits of professional body accreditation. The possibility of subject-based differences in attitude made it important that the interviewees selected for the enquiry stage of the research represented a range of subject disciplines. Even if it was not part of the project to analyse any differences of view that may result

from subject background, it was important to try and reduce or eliminate any adverse effects of subject influence.

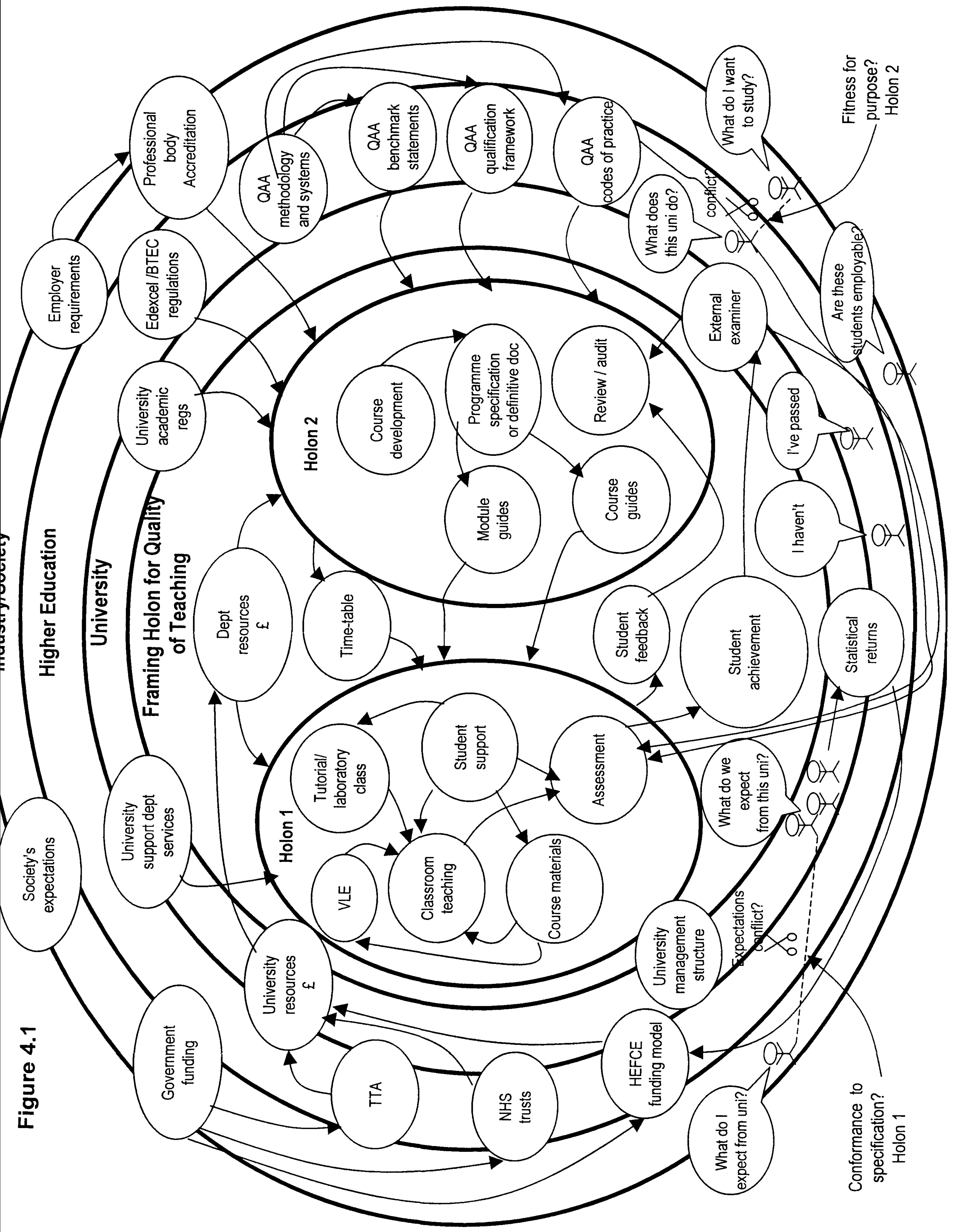
### **The Context of the Framing Holon**

Using the material from the interviews and the analysis of the literature review, the technique of “rich pictures” was used to develop the framing holon. The first stage of the process is for the researcher to return to the notes of the interviews and literature review and analyse them from a different standpoint. The original analysis sought to determine the interviewees’ general attitudes to the assessment of quality in higher education and to determine their views on the potential for performance indicators to enrich the process. This was partly to test the feasibility of the research proposal and partly to triangulate some of the issues that appeared to be emerging from the literature review. The holon methodology framing stage requires the development of rich pictures that break down or refine the broad area of interest into sub components that would eventually lead to the development of metrics.

The notes from the interviews were reviewed in order to determine what in the opinion of the interviewees were the broad components, processes, artefacts that contributed to the quality of higher education. The initial task is to develop the definition of the framing holon which delimits the boundary within which the eventual metrics or performance indicators will apply. In doing this, one needs to examine the environment within which higher education takes place and assign various demands, influences, protocols and processes to appropriate strata within that environment. The result of this process is featured as Figure 4.1, but it is important to describe the way in which it was derived from analysis of the interviews and the literature review.

As a starting point or context level, a broad category of “Industry or Society” can be specified. Among the issues that influence the quality of higher education in this stratum would be Government funding, employer

Figure 4.1



requirements of graduates and diploma holders, professional and statutory body requirements. There is also a less easy to define set of issues around what society expects of higher education and its graduates. This includes certain expectation of responsible and ethical behaviour, expectations in terms of leadership in wealth creation and the general betterment of society and expectations on the part of potential students and their families on what it is like to be a participant in higher education. These issues need to be represented in an outer band of the rich picture that is labelled “industry/society”.

Within the outer band is another environmental stratum that can be referred to as “higher education”. Subsystems and processes within this band will have an influence on the quality of higher education, some more directly than others. Included in this band would be a variety of subsystems concerned with resourcing and monitoring, such as the HEFCE funding system, the HESA data collection and monitoring systems, and the various other resourcing bodies such as NHS trusts and the Teacher Training Agency. Also included would be the various funding bodies for research since in many instances, research is supposed to directly inform and enrich teaching in higher education. This band also includes the various regulatory bodies and their rules, frameworks and protocols. Edexcel regulations for Higher Certificate and Diploma programmes, as well as QAA benchmark statements, Qualifications Framework and Codes of practice all feature in this layer. Indeed the QAA and its past and present methodologies and systems for quality assessment and audit also form part of this band.

At the next layer a firm decision was necessary on the focus of the analysis. One argument says that the student attends a university or college and the “student experience” is determined by the relationship between the student and the university. The attendance on a programme, the courses or modules within that programme and the classroom and other sessions within those courses are subsystems within the “university system”. Consequently, it should be the university (or college) that forms the initial framing holon; this could be

thought of as a top-down approach. An alternative view is that, increasingly (in these days of fees and now top-up fees) it is the programme that the student focuses on and on which the student will make assessments about the quality of their experience. The university is there to provide necessary services to “enable” the delivery of a quality programme. This view would lead to the programme forming the initial framing holon and would be more of a bottom-up approach. This seemed to be the emphasis of most of the interviewees during the framing stage and has been the focus of most of the activities in quality assessment and audit over the past twenty years. As a result, this research used the programme as the initial framing holon and as the focus for the exploration of metrics and performance indicators.

Having made that decision, the university forms the third and final environmental band or stratum. Within this will be the university resourcing systems, university statistical and other monitoring systems, the external examines processes, the academic regulations and the university management and organisational structures. All of these systems, processes and frameworks contribute towards the student experience to a greater or lesser extent. As a result of the above analysis, the actual framing holon is termed “Quality of Teaching” and reflects the student experience on the programme and is shown, appropriately, within the university.

### **The Development of the Framing Holon**

In looking at the issue of the quality of the student experience on a programme within a university, it is useful to consider the two dimensions of quality that feature in all service industries, and that was referred to in the interviews and in the literature review. These are “fitness for purpose” and “conformance to specification”. In doing this, I inadvertently fell into a trap that did not become apparent until the second or third draft of Figure 4.1. In the Higher Education and Industry/Society bands of Figure 4.1, there are a number of regulatory frameworks defined that influence directly or indirectly the quality of the

student experience. At industry level there are the requirements of professional or statutory bodies and at the Higher Education layer, there are the QAA Codes of Practice, the Qualifications Framework and the Benchmark Statements, as well as the Edexcel and other accrediting body requirements. In considering these, it was easy to think of these as various forms of specification and, having done that, the areas of the programme operation that directly interface them (programme development and specification) would need to conform. Therefore, it was natural to define the sub-holon containing these processes and operations as “conformance to specification” and to congratulate myself for a neat tie-in to industrial models. The other main sub-holon, which would contain the main elements of delivery of the programme, would necessarily be about “fitness for purpose”.

By about draft three of Figure 4.1, however, it became apparent that there was something seriously wrong. The systems and processes that were emerging as part of the definition of the “fitness for purpose” holon were about the student experience in the classroom, laboratory or tutorial, the materials used and so on. In fact they were concerned with the question “Was the student experience of the programme what the student expected and what the course (and university) documentation specified?” That documentation together with the basis of the student expectation was in fact the “specification” and the sub-holon under consideration was in reality about conformance to specification and not fitness for purpose! If the industrial model were to fit, then the other main holon would need to be about fitness for purpose and, following further analysis of the interview and literature review notes, it was possible to see how the fit could be applied.

What is offered to the student as an educational service falls under the category of fitness for purpose. The programme is part of an offer that must be one that is appropriate in the university’s aims (such as widening participation, vocational orientation, satisfying local employment needs etc.) To meet these aims, the offer must include an appropriate subject portfolio. It may use

references to benchmark statements and other external points but the issue is “Is it what the customer wants?”

If the offer is what the student wants, then the performance of the institution in delivering that service falls under the category of “conformance to specification”. This covers the service that the student receives both in the classroom and through the supporting services. The consequent strategy for the quality of teaching and learning is intended to ensure that the university delivers what the student wants.

This distinction is of some importance. Quality assurance, maintenance and enhancement have been seen as one of the key components in the competitive success of a number of organisations in a variety of manufacturing and service industries (Hill, 1991, pp353-356 and pp 379-383). As discussed in the literature review, quality assessment and audit have become permanent and growing features of higher education and any best practice from other industries would be worthy of consideration. The interviewees were keen to borrow the terminology from other industries. However, if such good practice is to be imported, then it is essential that it is adapted in the correct way. If this is not done, then any tools used may be applied in incorrect ways and the wrong results may emerge.

Having determined the two main sub-holons, and related them to models from outside Higher Education, the development of the framing holon proceeded in two ways. Firstly, it was necessary to determine whether there were any processes or activities that were a part of the student experience of the programme but did not naturally form part of the two main sub-holons. After this analysis, the conformance and fitness holons had to be further analysed in terms of their own sub systems and processes.

There are some things that are done on a programme basis (usually under the management of a faculty, department or school) that do not easily fit within



either the conformance of the fitness holons. Resource allocation is one of these. Although the details differ between universities, there will be a system of allocating a portion of the university resources (staff, equipment, accommodation, money) to a particular programme and the amount of resources allocated can directly affect the quality of the student experience. This is, perhaps more obvious in terms of the conformance to specification due to the direct impact of the number and quality of staff, quality of course materials, laboratory equipment and so on. However it also affects the fitness for purpose activities. For example, the amount of staff time necessary to undertake thorough market and subject research as part of the course development process is very often under-estimated.

Timetabling is a departmental activity that, potentially, has a significant effect of the student experience. If it is done badly, or is severely constrained through lack of resources (staff or accommodation), then the student can be presented with a timetable that obstructs other important aspects of their learning or other life experience. This will in turn have an adverse effect on the student's view of the overall quality of their teaching and learning experience.

Student assessment and achievement are often considered together and in such cases, they would be co-located within the conformance to specification sub-holon; did the student pass the assessments and achieve what they expected or what was indicated in the publicity documentation? The difficulty of this approach was alluded to by interviewee A when commenting that the results of a quality education are often not apparent until some time after it has been completed. Achievement and assessment have therefore been separated for the purposes of this analysis. Assessment is part of the teaching and learning process and there are strong arguments for including it within the conformance sub-holon. This leaves the decision of whether achievement is within the conformance to specification area or whether it is also influenced by other aspects of departmental or university life and should therefore fall outside. For

the current version of Figure 4.1 it was placed outside but this was discussed further during the follow-up interviews.

The final programme based activity that was difficult to place within either of the main sub-holons was student feedback. It plays a part in the programme monitoring and review process and this in turn is part of the determination of a programme's fitness for purpose. However, student feedback, whether from programme board representation, questionnaires or informal comment, is informed by judgements of the degree of conformance to specification of the programme. It seems reasonable, therefore to treat it as a linking holon between the main two sub-holons.

The next stage of the analysis looks inside the fitness for purpose and conformance to specification holons in order to refine their definition. In addition to the analysis of the notes from the interviews and the literature review, a more detailed reference was made to the regulatory requirements currently governing UK higher education. At the outset of the project, a decision was made to undertake the research into quality in higher education from a general stance as opposed to being bound by any particular assessment or audit methodology or regime. Although detailed reference has been made to the QAA and its various predecessors, this has not dominated the literature review and its analysis, the framing stage, or the development of the framing holon. However, when analysing the detailed content of the fitness for purpose holon, this methodology independence has to be temporarily forfeited. The reason for this is that at the present time, university funding for EU students is managed by the HEFCE and part of the conditions for the continuation of that funding is that the university adheres to the requirements of the QAA and other regulatory bodies. For example, all funded programmes will at some stage be required to demonstrate that they conform to the qualifications framework and the relevant subject benchmark statement and that the parent university's systems and procedures conform to the QAA codes of practice. As a

consequence, some of the components of the fitness for purpose sub-holon necessarily, directly relate to QAA regulations.

### **Fitness for Purpose Holon**

In the analysis of the fitness for purpose holon, I have drawn on my own experience as an external examiner and QAA reviewer as well as that of the interviewees used in the framing stage, all of whom have had similar experience in my own and other universities. For a number of years, new universities (and some traditional universities) have had, as part of their own quality management processes the requirement for all programmes to have a “definitive document”. This is a full description of the programme ranging from a discussion of the rationale and aims of the programme through learning objectives, curricula and booklists, assessment specifications to awards. The structure and format of such documents varied considerably from institution to institution but there was general agreement on the usefulness of such a repository of programme information. Following the publication of the various subject benchmark statements, the QAA produced recommendations for a slimmed-down version of the material contained in the definitive document and developed a recommended template for a “programme specification”. The aim was to define a minimum set of standard factors to be used to define a particular higher education programme. The programme specification has since become a requirement and universities are in the process of developing them for all programmes. The programme specification or the definitive document should therefore be one of the components of the fitness for purpose holon.

There is normally a comprehensive procedure within university regulations for arriving at a definitive document or programme specification. The nature of the procedure is different for a new course as opposed to the review of an existing course, and these procedures vary considerably between universities. However, all universities will have mechanisms for designing new courses, which I will refer to as course development and reviewing existing courses, which I will

refer to as review/audit. Typically, course development will consist of a number of stages covering the seeking of approval from the university authorities to start development, course planning, design and development, taking into consideration QAA regulatory frameworks and professional and statutory body requirements and culminating in some form of validation event. The “deliverable” from these activities is the programme specification and/or the definitive document.

The process for reviewing and updating existing programmes is probably even more variable across institutions than for programme development. There are, however a number of common features that enable the development of a reasonably institution-independent holon to contribute to the fitness holon. These common features include the review of student achievement, both the final output qualifications and the progression statistics. They are either reviewed as basic reported information or, more usually accompanied by comments derived from the reports of external examiners. The progression information is normally of a statistical nature, whereas the achievement information can be both quantitative (number of first class honours degrees, upper seconds etc.) or qualitative, looking at the types of employment or further study taken up by the graduates.

Student feedback often plays a part in the review process. As discussed above, this can arise from a variety of sources and the degree of attention paid to it in the review process varies between institutions. However, student feedback is becoming an increasingly important part of the QAA review procedures (QAA, 2000b, p.51). Any additions or changes to the Higher Education regulatory environment (QAA Codes of Practice, revisions to benchmarks etc.) will influence programme review. A further factor is that most accreditation by professional or statutory bodies is granted for a limited period of time. Consequently, accredited programmes will naturally be subject to review at the end of their accreditation period and will need to incorporate any changes in the requirements for accreditation.

The programme specification or definitive document is not always suitable for a variety of different audiences despite attempts to make them so. In particular, students do not always need to see the detailed rationale for the course or the staff CVs but they will want to see a comprehensive description of what they need to do in order to meet the assessment requirements and what they will be doing on a session-by-session basis. For this reason, most programmes are supported by a programme and/or module/course guides. These are a part of the programme development process that is itself part of the fitness holon, but they also feed into the conformance holon to become part of programme materials.

### **Conformance to Specification Holon**

The same sources of information (my own experience and that of the interviewees) have been called upon in the development of the conformance to specification holon. The focus of a number of the references on quality in higher education is the activities that take place in the classroom or lecture theatre. This is probably still the basis of the delivery of teaching materials for the majority of programmes, although a number of the interviewees reported a welcome move towards greater use of tutorial, laboratory and distance and computer based methods. Where these methods are being used it is still more often the case that they are used to supplement and support the lecture as opposed to replacing it. It is for this reason that the tutorial and laboratory classes are shown as separate. Distance methods have traditionally been seen as an extension of course materials, developed in such a way as to avoid the need of face to face support from the lecturer. In doing this different development techniques are required in order to substitute for the lack of opportunity for the student to ask questions, but the end result is a set of (comprehensive) course materials. Computer-based methods have undergone considerable development over the past ten years and are now often centred on Virtual Learning Environment (VLE) software packages that allow presentation, feedback and

assessment through the university computer networks. This is an extension of the distance-learning concept and is therefore shown separately in Figure 4.1.

The level of support given to students as part of the teaching and learning process can have a significant effect on the quality of the student experience. The most direct form of support (other than the academic tutorial) is often referred to as the personal tutor system. This involves the nomination of an individual member of academic staff for each student. The student is then able to go to that member of staff with any problem of an academic nature or of a more personal nature. The “personal tutor” may be able to give appropriate advice to the student but, more importantly, should be able to refer the student to more specialist support services where appropriate. Very few students will have a completely trouble-free university career and so the quality of the student support makes a considerable contribution to the overall student experience.

The final part of the conformance to specification holon concerns assessment. It is a complex area, which plays a number of parts in the student experience. The most common view of assessment is that it tests a student’s knowledge and skills in the area to determine whether they have achieved a certain level of competence. It can also be said to test the competence of the teacher in getting the concepts and practices of the subject across to the students. Assessment allows the teacher to judge the pace of the delivery of the material by showing how well or poorly the students are absorbing it. It also provides a mechanism for feedback to the students to enable them to judge their own progress and make adjustments or seek further help where necessary. It feeds out to the achievement holon and is influenced by the external examination process. Having completed the initial analysis and development of the framing holon, the next stage was to test the interpretation by reviewing the rich picture with the interviewees.

## **CHAPTER 5: THE ENQUIRY STAGE**

Both the holon methodology itself, and my own experience of it, is relatively new and it was therefore proposed that a short trial run of the enquiry stage interviews was undertaken. This was to enable a walkthrough of the initial framing holon and its rich picture and also to test ways of guiding the interviewees towards the types of statements that would enable the derivation of questions and metrics. An interviewee was chosen for this trial run from within London South Bank University. Dr. G is a Head of one of the Divisions within the school of computing. He was not one of the original group of interviewees used for the framing stage, and was therefore a good candidate for the assessment of how easy it would be for the interviewees to adapt to the area of study and the form of investigation. His area of expertise is in operations research and mathematics and, although he is familiar with the notion of soft systems, it is not directly within his area of expertise. As a consequence, it was also possible to judge the effectiveness of the rich picture in conveying existing ideas and in recording new ones.

### **The Enquiry Stage Test Run**

The first part of the interview involved a “walk-through” of Figure 4.1. The notion of holons was explained, together with some of the less obvious symbols such as the crossed swords to represent some form of conflict. The outer layers of industry/society, the higher education environment and the university (as a corporate whole), were explained along with the various holons appearing in them. The notion of the “quality of teaching” holon as a frame for the study was explained, as was the main split into fitness for purpose and conformance to specification. As with my own revelation, Dr. G accepted the argument that the usual view of conformance to specification as being concerned with the benchmarks, qualifications framework and codes of practice was perhaps misplaced. He agreed that the holon relating to these outside standards was

more properly fitness for purpose with conformance to specification being concerned with the delivery of programmes and courses to the students.

There was some debate over the positioning of the holons concerned with timetabling, student feedback and student achievement. In the figure, these are shown as outside the two main holons but linking them either directly, as in the case of the first two or indirectly as with achievement. A very sound case can be made for timetabling being outside, since it concerns the translation of the course specifications into timetabled sessions and resourcing those sessions with the appropriate staff. It is not therefore a part of either conformance or fitness for purpose but a translation of the latter into an enabler for the former. Dr. G's view of both the student feedback and student achievement holons was that they both should be part of the conformance to specification holon. Feedback informs the teaching in the classroom as well as the review processes because it incorporates real-time response as well as reports and questionnaires and as such enables the teacher to adjust (and improve) his/her approach at the time. An aspect of student achievement is also the feedback to the teacher on how well the students are performing which, in turn, is a measure of the success of the teacher. Using this view, there is a strong argument for it being a part of the conformance to specification holon. Although these views are accepted, it was decided to leave these three holons where they are until further views from the other interviews in the enquiry stage are known.

Following the walkthrough of the rich picture of Figure 4.1, the test of the enquiry stage was undertaken by asking Dr. G to concentrate his analysis of the conformance to specification holon. The procedure to be tested was to address each of the holons within conformance to specification and to explore what is meant by the title of the holon and what constitutes quality in that aspect of delivery. If this can be done via a series of questions then the answers to those questions may help lead to metrics that can be developed into performance indicators.



Classroom teaching was taken as a starting point and Dr. G was asked to determine what, in his view, was important to the student experience in terms of what takes place in the classroom. In doing this, care had to be taken to keep to the broad holons that were agreed as appropriate at the walkthrough stage. For example, the first aspect of quality classroom teaching that Dr. G referred to was concerning the clarity and ease of understanding of the teaching. On closer investigation, however, the clarity and ease of understanding is really more to do with the material being delivered than the delivery itself. The same can be said on whether the class session is interesting or not; again this is about the material itself rather than its delivery.

The actual event (of the delivery of a course in a classroom by a teacher) derives many of its quality characteristics from its consideration as an event rather than as teaching and learning. For example, many of the factors that in Dr G's view may be thought to underpin the quality of any event are rather mundane sounding. They include the following.

Does it actually take place?

Did it start on time?

Was the accommodation appropriate?

Were the facilities adequate?

Was the presentation itself clear, visible and audible?

Did it finish on time (not too early or too late)?

Was it entertaining?

Was it useful?

The last two items on the above list of questions are perhaps less “mundane” than the others and tend to relate more to an educational performance by a teacher than to just any event. As with ease of understanding and interest, a discussion centred on whether or not they related to the material itself, as opposed to its delivery. On reflection, a fairly strong case can be made for “Was it useful?” to be a question more related to the material itself than its delivery by the teacher in the classroom. “Was it entertaining?” is less clear-cut. Certainly, there is an argument that the author of course materials should make them as entertaining as possible without distracting from their instructional purpose. However, both Dr. G and I were also of the view that an excellent teacher can sometimes make the most boring material entertaining by delivering it in innovative ways. This is the notion of bringing a subject to life and this can be done through both the material and its delivery. As a consequence, “Was it entertaining?” is a question for both the classroom teaching and the course materials holons.

The course materials holon has a number of questions that could be related to the determination of the quality of the materials. Some of these have already been flagged in the above paragraphs and these include the following.

Was it entertaining?

Was it useful?

Was it clear and easy to understand?

Was it interesting?

Further discussion revealed three other questions.

Was it available?

Was it accessible to the students?

Was it complete?

An area that has become increasingly important as the various forms of quality assessment and audit is that of the specification of clear and unambiguous learning outcomes. These apply at course module level, at programme level and even at department or institutional level. It is therefore important to ask of the course materials:

Do they meet the stated learning outcomes?

This is also a question that has to be applied to each assessment set as part of a course since all assessments should meet a subset of the learning outcomes. When the complete set of assessments for the course are assembled, all the learning outcomes should be seen to have been assessed. “Does the assessment meet the relevant learning outcomes?” is therefore one of the questions that could be applied to the Assessment holon. Further discussion with Dr.G added the following possible questions.

Was the assessment timely?

Was it relevant?

Were the questions clear and unambiguous?

Was a clear deadline for handing in the work set?

Was the feedback given to the students adequate?

Was the feedback timely?

## Conclusions of the Test Run

The interview with Dr. G served three important purposes. Firstly, it provided an initial test of the results of the framing stage of the study. This was in terms of whether the interpretation of the framing stage interviews encapsulated in Figure 4.1 accorded with the view of an independent, senior academic with many years of experience of higher education. The test of Figure 4.1 also related to its use as a communication tool. The intention for the enquiry stage was to provide the selected interviewees with a document describing the aims of the research and outlining the methodology used. At the interviews, it was intended to use Figure 4.1 as a basis for the discussions in order to be able to demonstrate the connections between the holons under study.

The second purpose of the interview was to ascertain the degree of structure necessary for the enquiry stage interviews. The literature on the holon methodology, and discussions with the team at London South Bank University, suggested that there were no specific rules governing the degree of structure in the interviews. Some topics, such as the parent discipline of the methodology, software engineering, lend themselves to the development of specific questions directly related to a quantification issue. For example, a quality specification for a computer programme may include a statement of the correctness of the coding. This readily lends itself to a question such as “How many errors were detected per 1000 lines of code?” and this readily translates into a metric. Other topics, such as the subject of this research lend themselves less readily to this kind of statement. The enquiry stage for such areas must therefore consist of much more open questions, eliciting the interviewees’ broad views on what constitutes a quality student learning experience.

The third, and arguably the most crucial, purpose of the trial run interview concerned adjustments to the scope of the project. It became clear during the interview with Dr. G that the material that could be explored within the enquiry

stage was rich and plentiful; in fact it could be argued that it was too plentiful given the constraints of the study. The interview with Dr. G lasted about ninety minutes with additional follow up and clarification of some of the points raised. However, inspection of the issues discussed will, when compared with Figure 4.1, indicate that the discussion only centred on holon 1: the conformance to specification holon. None of the issues that Dr. G felt important related to the holon 2: fitness for purpose.

There could be a number of reasons for this. Although Dr. G is a senior academic involved in the management of a department, he is still very much a practising teacher. It could be the case that his natural tendency, when discussing teaching quality and the student learning experience, which forms the broad area under study, was to concentrate on the classroom, the material, the assessment and so on. These all form holon 1. As a manager, Dr. G is concerned with programme validation, monitoring and review, recruiting successfully to student targets and ensuring continued professional body accreditation, but he did not automatically see these aspects as improving the quality of the student experience.

It could also be the case that there are established measures for many of the areas of activity encapsulated in holon 2, albeit not always articulated as metrics. For example, a review panel will expect to find programme specifications, which adhere to the QAA guidelines. And this immediately could be a binary metric. Either they are there or they are not. If they are not, the department will come in for some criticism from QAA but this may not have a direct effect on the students currently on the programme. For this reason, they may not be thought of as direct factors in determining the quality of the teaching and learning experience.

There is also the question of the possible dual role of some of the constituents of holon 2. For example, course and module guides have been included as part of holon 2 because they define in detail a course or programme, thereby

enabling a reviewer to test its fitness for purpose and the extent to which the QAA guidelines have been adopted. However, these same documents could be thought to be part of the course materials that feature in holon 1. Good course materials inform students of what is expected of them and what they can expect throughout the course and this is one of the purposes of course and unit guides.

The experience of the interview with Dr. G and the realisation of the wealth of material and issues that could be pursued, led to a significant decision on the scope of the remainder of the project. That decision was to restrict the enquiry stage and the subsequent attempt at metrication to the area covered by holon 1: the actual experience of the student in the real (or virtual) lecture, tutorial, seminar or laboratory session.

Following the interview with Dr.G, the use of Figure 4.1 as a prompt for the Enquiry Stage interviews was reviewed. Although it proved useful as a focus, it was felt that the outer holons might divert the attention away from the conformance to specification holon, which was to be the subject of most of the questioning. Consequently, Figure 5.1 was produced. In it, the holon was expanded and some of the factors that emerged from the framing stage and from the interview with Dr. G were added to the sub-holons. The aim of this was not to present a complete picture to the interviewees, but instead to illustrate some of the aspects that may influence the quality of the student experience. This was an alternative to providing a list of topic areas to the interviewees.

### **Selection of Participants**

The enquiry stage would therefore concentrate on holon 1: conformance to specification. Following the experience of both the framing stage and the trial interview with Dr. G, the approach would be one of very loosely structured interviews, guided by Figure 5.1, with an appropriate sample of people. The

Framing Holon For Quality of Teaching

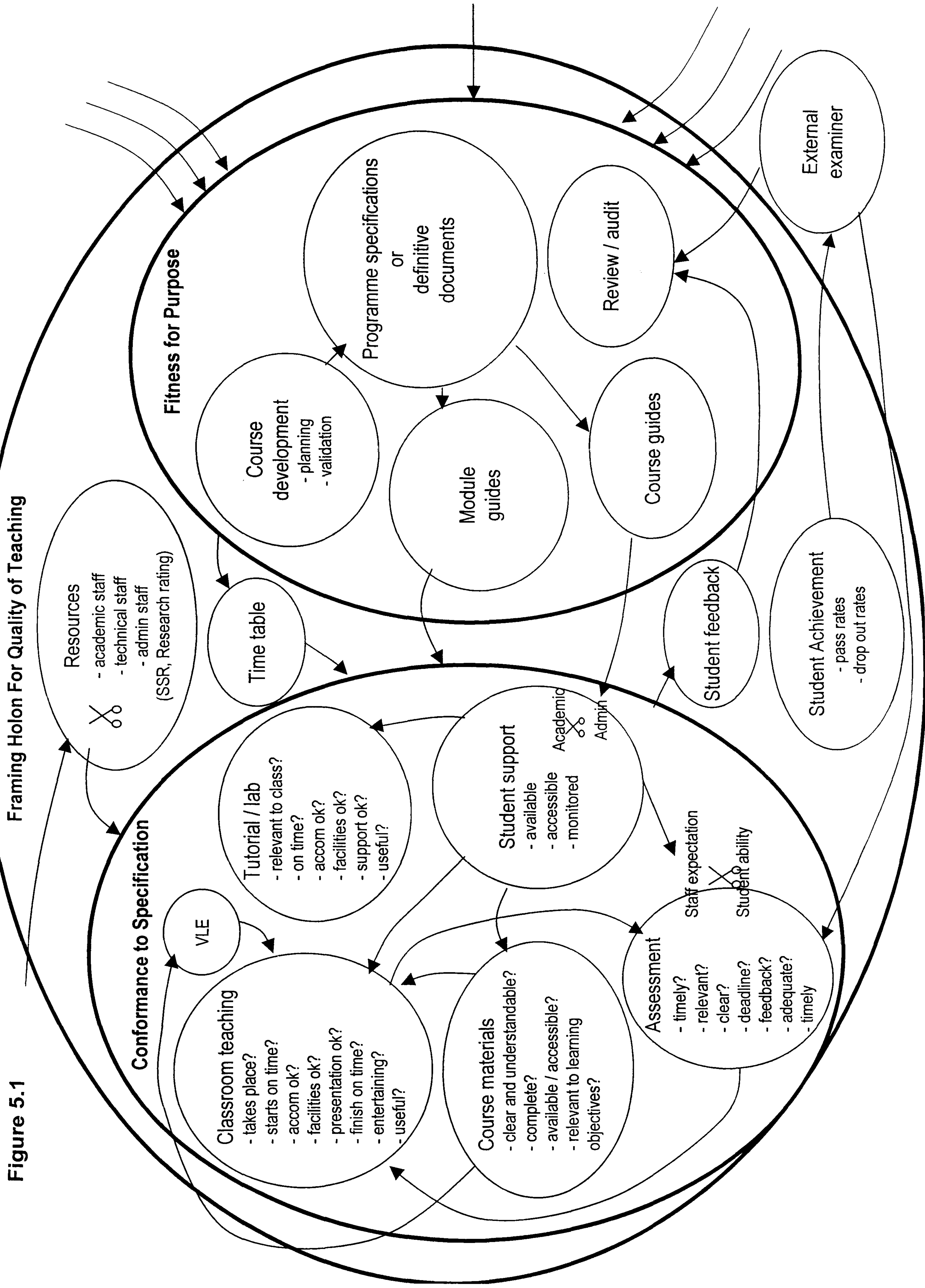


Figure 5.1

interviews would be an exploration of the views of the subject on the main areas depicted within the conformance to specification holon in Figure 5.1. These were as follows.

Classroom teaching

Tutorial, seminar or laboratory classes

Course materials

Assessment

Student support

The use of Virtual Learning Environments (VLE).

The selection of the sample of subjects for interview consisted of staff and students from the higher education sector. The selection of the sample could not be done on a purely random basis because of both operational and sampling constraints. The main operational constraint was that restrictions on the time and budget available meant that most of the interviews had to be in the London area. It was not possible to fund trips to various parts of the country for either single or clusters of interviews. Despite this, it was thought that it would be unlikely that the resulting sample would be too unrepresentative of the views of the industry. As long as the subjects had experiences of other institutions through previous employment or study, or through the numerous opportunities to work in other institutions as external examiners, QAA reviewers or through other roles, the fact that they all currently worked in London should not be a major source of bias.

It was important to include subjects from a variety of roles within higher education. The sampling method therefore aimed to select senior institutional



managers, staff with subject quality assessment and audit experience at various levels, academic staff with programme and course management experience, experienced teaching staff and staff from administrative posts concerned with quality or student management functions. It was also important, wherever possible to ensure that members of staff were selected from a range of academic backgrounds, for the reasons specified in the analysis of the framing stage. The sample of staff totalled eleven. The staff sample was augmented by the inclusion in the enquiry stage of six “students”. The use of the inverted commas is due to the fact that I wanted the student group to be able to reflect on their whole programme of study and so, strictly the group would be more accurately described as “graduates”. It was important to try and ensure that the group would provide insights into what a quality teaching and learning experience after having had time to reflect on the total package. This decision was informed by comments from the framing stage, and in particular the strong view held by A that a “good university education is not always possible to acknowledge until sometime after its completion”. Again an attempt was made to obtain a range of subject areas as well as a mix between “traditional” students (full-time with A level entry) and those from less traditional routes.

Staff and student subjects were selected through personal contacts, working in London higher education institutions, which were developed as a QAA reviewer and through a variety of other contacts. The interviewees were from both old and new universities, with the majority from the latter. None of the interviewees were people that had been involved in the framing stage of the methodology. Although those subjects were used to verify the findings of the framing stage, it was thought more appropriate to obtain a completely different set of interview subjects for the enquiry stage. The group that developed the methodology (Bell, et. al., 2000) do not have specific views on whether the same personnel should be used in both stages.

The resulting sample of interview subjects that formed the staff group was follows.

Dr. H: Dr. H is a Pro-Vice Chancellor with responsibility for Students and Quality. Prior to that, she held a post of Dean of Academic Affairs, and has also had previous responsibilities for planning and information. Dr. H has an Honours Degree and PhD in mathematics.

Dr. I: Dr. I is currently a Campus manager/registrar at a new university in London. Dr. I started his career as a course administrator and has secured successive promotions through office manager to faculty manager. He is part of the QAA panel of Audit secretaries. His doctorate was in the area of modern history.

Ms. J: Ms. J is a Principal Quality Officer, a senior administrative post within a unit responsible for overseeing academic quality assurance systems. Previously she was a faculty academic support officer and prior to that, an office manager. She also undertakes part-time tutorial work for the Open University. She holds an MBA.

Mr. K: Mr. K is a Deputy Dean of a Faculty that encompasses computing as one of its main areas. He is responsible for various aspects of the faculty including operations, timetables, non-academic staff and accommodation. His previous post was that of a Head of an academic division and before that, manager of a large (600 plus students) programme in Business Information Technology. He has a degree in Accounting and Finance and a Masters Degree in Computing.

Ms. L: Ms. L is a Principal Lecturer in Human Resource Management and is responsible for the promotion and management of a Virtual Learning Environment within her university. She has previously worked in the Further Education sector and has considerable experience of course validation monitoring and review. Among her previous jobs was being Chair of an Academic Standards Committee.

Mr. M: Mr. M is the course director for a medium sized course (around 200 students) in Computer Science. He has been a senior lecturer in various aspects of computing and researches in computer education and human computer interfaces. His background is metallurgy and he was previously a secondary school teacher of science before reading for a Master of Science in Information Systems Engineering. This was a pre-cursor to moving into higher education.

Prof. N: Prof. N is the leader of a research group in Information Systems. He is also the head of postgraduate programmes for his university school. He is an experienced QAA subject assessor and was one of the few people involved in the pilot developmental reviews. Prof. N obtained a Masters degree in Industrial Applications of Computing and then went on to complete his PhD, in the area of object-oriented computing.

Dr. O: Dr. O took his first degree in Mechanical Engineering before moving into higher education as a lecturer in engineering. He had experience in course development and course leadership, working with colleagues in other departments to develop a degree in Technology Management. He gained an MBA by part-time study and became a principal lecturer in Engineering and his school senior recruitment tutor. He recently obtained a PhD in a specialist area of fluid mechanics.

Mr. P: Mr. P is a Pro-Dean of a Business and Computing faculty. His area of responsibility is “students and quality” which covers all aspects of maintenance and enhancement of the quality of the student experience within his faculty. He was a principal lecturer in economics and had responsibility for aspects of student support. His degree is in Economics and he has a Masters in Economic History.

The interview subjects that formed the group of graduates were as follows.

Mr. Q: Mr. Q recently graduated in History from an old and well established College of London University. He entered straight from school having three good GCE Advanced level grades.

Ms. R: Ms. R read Geography at a “red-brick” university. She entered straight from school with three good grades at GCE Advanced level.

Ms. S: Ms. S undertook a higher education course as a mature student returning to education at a Further Education College. She then went on to complete an MSc in Organisational Behaviour.

Mr. T: Mr. T left school with limited qualifications and attended college to obtain a Higher National Diploma in Computing.

Ms. U: Ms. U returned to education after working in secretarial and administrative posts for a number of years. She undertook a part-time “return to learning” course at a post-1992 university. She then studied for a further six years by part-time study to gain a first class honours degree in social science.

Ms. V: Ms. V is on the point of completing an honours degree in humanities from the Open University, after some eight years of study. Although most of her study was by distance learning, as part of her various courses, she has had to attend summer schools, lectures and tutorials, many of which were delivered in a conventional classroom situation.

The interviews were conducted in no specific order. No attempt was made to timetable the subjects in terms of their job, subject background gender or anything else. The sequencing of the interviews also interleaved staff subjects with graduate subjects. The reason behind this decision was that all interviews needed to start with “a clean sheet”. In other words, each interview was conducted with the subject having been previously sent a nine-page summary of

the research carried out so far and with a copy of Figure 5.1 on the table to act as a guide for a “walkthrough”. No knowledge of the emerging views of the subjects was consciously carried from one interview to the next. This is an important factor in the enquiry stage. It is likely that issues emerge that, when analysed, may suggest potential metrics or even performance indicators. However, testing those proposed metrics with interview subjects is the substance of the final stage, the metrication stage, of the exercise and not part of the enquiry stage.

Having decided to interview the subjects in no specific order, mixing student/graduates with staff subjects, a separation of the groups was done in the writing up and analysis of the interviews. The material from each group was analysed and reported under the headings relating to the component holons of the conformance to specification holon in Figure 5.1. The main reason behind this approach to the analysis of the material was to determine whether the student view of a quality educational experience differed in any way to the views of the staff on the same topics. It was not known at this stage whether or not this would lead to different metrics emerging or to different interpretations of the same metric.

The purpose of the holon methodology is to produce metrics and performance indicators. In doing this, the researcher is guided through the data collection and analysis processes down paths that are likely to lead to the emergence of a metric. The methodology therefore helps the researcher determine whether a metric in a certain area is capable of being produced by cutting off that line of enquiry if a metric is not likely to emerge. The resultant set of metrics can then be tested in terms of their usefulness through interviews and this would lead to the rejection of performance indicators that are deemed unworkable.

## **Analysis of the Staff Interviews**

### *Classroom Teaching*

The first theme to emerge from the discussions around classroom teaching centred on “the performance ”; what constitutes a good experience for the students in terms of the lecturer’s delivery of the material. According to O, the lecturer needs the wisdom and experience to be able to determine the correct balance between the structure and the “looseness” of the presentation. This balance may vary between subject disciplines with the science and engineering disciplines veering towards the greater structure, but it is important for the lecturer to know the likely best approach for their subject. Whatever the discipline, however, it is important to employ a variety of teaching methods in an attempt to keep the learning active rather than passive, to make the session exciting and challenging but not frightening. O summarises this as the need to “push the right buttons”. Much of this depends on the experience of the lecturer and according to K,

“experience of good days and bad days is the best teacher for the teacher”.

K also pointed out that the current approaches to staff development might be lacking in that there tends to be a lack of emphasis on the development of the “human aspect” of the lecturer and on the ability to reflect on the teaching experience.

P supports the view of getting the balance of the performance right, including the need for the active participation of the students. He emphasised the need to encourage interaction between students and lecturers, to get them to think about what the lecturer is saying rather than merely copying the material down (a theme that will be revisited later). However P acknowledges the need for the balance. He commented that

“many of our students are not high fliers capable, in the initial stages, of independent study – they need a structured delivery”.

The need for the lecturer to be able to adapt his or her performance becomes increasingly important as the classrooms become more culturally diverse.

According to L,

“The good teacher adapts their style to the needs of the organisation – the problem is the cultural diversity”.

O also mentioned this as a crucial factor in presenting material,

“A lecturer that is aware of, and can reflect the cultural diversity in material and performance will enrich the student experience; especially those from minority backgrounds”.

This often presents a dilemma to the lecturer in the classroom. Both L and N raised the issue of students from some cultures expecting to be lectured to in order that they learn the material by rote. To adopt a more discursive or interactive approach would make such students feel distinctly uncomfortable and lead to a worsening of their learning and teaching experience. The problem is that this approach (rote learning) flies in the face of most views of what constitutes a quality learning experience. In some institutions, the cultural diversity can be quite marked. According to L,

“We did a survey in the class and out of the twenty or so present, I was the only white British person from a two-parent background”.

Only two of the staff interviews subjects made reference to subject expertise. M mentioned that as a course leader for a large programme, he receives complaints from students relating to a variety of aspects of their classroom

experience. The most difficult to deal with are those where students feel that the lecturer is lacking in some way in the knowledge of their subject. N took this point further;

“For some students, particularly part-time students who are working in the industry, they can quickly pick up on a lecturer’s lack of subject knowledge”.

One possible reason for the lack of discussion of this issue is that it may, thankfully, be a rare occurrence and that most lecturers do have adequate subject expertise. Alternatively, it may be a topic that it is somewhat uncomfortable to explore.

O raised the issue of the introduction of humour, anecdotes or parables as a way of enriching the performance. His view was that as long as the lecturer had sufficient time to think through how a story may be used to reinforce the material, it could be a very useful device.

“ Think of a poem, a tale, an event for each lecture to peg the material to in order to make it more memorable...but storytelling can only be successful if you’ve had enough time to do the pegging effectively”.

L supported this view. She felt that if jokes or anecdotes can inspire the students to read further then they would have fulfilled their purpose. However, P added a note of caution, when he was discussing this technique. He thought that, on occasions, telling jokes can be a substitute for good teaching in that it can act as a cover for lack of substance.

The issue of the active participation was mentioned above and, although most of the discussions around interaction between teachers and students occur under the tutorial/seminar heading, some of the staff interviewees raised the issue in the context of the lecture. P felt that interaction is possible in a lecture situation



even if it is restricted to questions and answers. However the lecturer needs to be sensitive to the needs of the students and to avoid the potential for embarrassment of the student. According to O there is a need be able to pose a question but pick up on the nature of the look (from the students) so as not to intimidate them. P also mentioned that if students are lacking in confidence and the lecturer is actively trying to get them to participate against their will then that is bound to lead to a bad student experience. The lecturer needs to establish a framework in which the students feel safe and not intimidated. There needs to be an active attempt to build up their confidence. K supported this view by observing that many students currently entering higher education

“do not expect to have to analyse things in the way that we did”.

He feels that their previous experiences lead many to expect more of a training environment with an emphasis on skills and breadth of knowledge rather than subject depth. Although this can be tolerated to a certain extent at the initial levels of an undergraduate programme, students need to be able to contribute effectively in terms of analysis, discussion, presentation and so on by the time they have reached level 3 of their programme.

The issue of students' attendance at lectures was raised by some of the staff subjects. It was raised in discussions about the presentation itself;

“students need to know that they will get much more from the lecture than just the slideshow...then they will attend”,

according to O. K felt that the personality of the lecturer had become an influential factor in encouraging students to attend their lectures. This became even more apparent when students were asked to choose options as part of their course, with the popular lecturers often having more students choosing their option.

P felt that in his institution the students expect and have “paid for” face-to-face lectures and for that reason they should be inclined to attend. M was of the view that some students assume that if they access the materials they will automatically pass the course without the need to attend. In this, according to M, they are mistaken because some of the learning objectives within higher education programmes can only be achieved through the face-to-face classroom experience.

The only subject to mention attendance in terms of the academic staff was a member of the administrative staff. J mentioned that in her view part-time students regard non-attendance by a lecturer as a very serious degradation of their student experience because it wastes some of their very limited and valuable class contact time. However she did feel that for full-time students, the non-appearance of certain lecturers could be welcomed as providing “time off”.

#### *Tutorials, Seminars and Laboratory Sessions*

In discussions on non-lecture academic sessions, O continued on his theme about the need for the correct balance between tight and loose structure and on the interaction between the students and the lecturer. His view was that the majority of the quality learning goes on outside the lecture. O felt strongly that appropriate signals had to be given to the students and part of this was for the lecturer to know the students’ names, especially in a tutorial group.

“I feel the student experience is enhanced considerably if the student thinks ‘He has taken the trouble to know my name!’”

He also felt that the tutor needed to have appropriate experience to be able to run successful tutorials. They needed the experience to be able to “manage the ebbs and flows” of the interaction and the confidence to allow more input from the students because

“making a class more democratic means giving up some of your power to enable learning”.

N emphasised the importance of interaction between the tutor and the students:

“Interaction is essential...we can learn a lot from primary school methods”.

Here, N was referring to the way in which his daughter’s teacher made it a point to involve every one of the children in the activities. N acknowledged that students pay considerable amounts for higher education but thought that the better return came more from the “consultancy” mode of the tutorial than the “sales pitch” of the lecture. H went further to assert that the less the lecturer has an input (to the seminar or tutorial) beyond the first and last five minutes the higher the quality of the tutorial.

K expressed the view that there was a need for genuine engagement of the students and that merely running question and answer sessions can be superficial. Genuine interaction necessitates the lecturer having sufficient knowledge to be able to appropriate “problem scenarios”. He felt that it was important for students to use tutorial time as part of a process of reflection on what they have learned or done, but that the majority of students’ previous learning experiences do not encourage this approach. To get the maximum benefits from tutorial or seminar sessions, it is usually necessary for students to arrive prepared, normally by having undertaken some background reading and this is something that, initially, they are unwilling to do. If this is the case, the tutorial becomes oriented towards absorption of material rather than analysis, which defeats its purpose. K went on to suggest that encouraging students to reflect on their learning needs to be done in subtle ways.

“You don’t say ‘go away and reflect on this’ but, instead, give them a relevant case study to analyse”.

Most of the interview subjects expressed the view that it was essential to try to get the students to participate through discussion, analysis and presentation in tutorials and seminars. This is necessary despite the fact that these activities are alien to many students. P summed the dilemma up by saying that

“Employers and the higher education industry expect students to be able to present, discuss, argue effectively and so we must overcome student feelings of inadequacy or lack of confidence”.

Many of the issues concerning student attendance that were reported above also applied to tutorial and seminar sessions and so will not be repeated here.

Because of the less formal nature of the tutorial as compared with the lecture, it is possible that staff attendance and punctuality may be an issue. M pointed out that, as a programme director he gets complaints from students about lecturers being late or not attending tutorials. However, M thought that there may be deeper “quality” issues behind the complaints.

### *Course Materials*

Most of the interview subjects acknowledged that there has been a significant improvement in course materials over the past few years. This refers both to the presentation material used in lectures, tutorials, seminars and laboratory sessions, and also the course and unit guides and handbooks that are issued to students to direct them through their courses. The majority of the subjects also felt that these improvements owed a significant amount to the introduction of teaching quality assessment first by HEFCE and later taken up by QAA.

There were, however other suggested contributory factors. M commented that it is far easier to produce better documentation and presentation material with current-day technology than it would have been ten to fifteen years ago.

Everyone involved in higher education realises this including QAA assessors

and, partly through that process expectations about the quality of presentation material have been raised. H expressed similar views, commenting that lecturers tend to be trained nowadays to be more like business presenters, relying on

“slick material and choreographed presentations”

and many people feel that the HEFCE/QAA quality assessment regimes have encouraged this approach.

M added that there are also libraries of excellent teaching material of an extremely high quality available, and these can be downloaded by lecturers for little or no cost. However, he knows of many colleagues who refuse to take advantage of these resources because of a “not-invented-here (NIH)” attitude, which results in lecturers not having the confidence to deliver materials that they have not themselves authored. M also feels that in some lecturer’s view the use of libraries of material is part of a wider issue in which some feel that the imposition of over rigid quality control systems has led to a degree of standardisation that challenges academic freedom.

N supported the view that the quality of presentation and support material had increased significantly, but viewed this as being due to a general increase in the professionalism of today’s lecturing staff. He also thought that the “NIH” attitudes may be changing and that certainly there is a greater ability and willingness to re-cycle materials from one course for use in another. This “re-use” is a natural activity in N’s subject discipline (Object-Oriented Computing) but he passes on a warning from his experience of re-use in that

“it can lead to problems if a lecturer tries to bend the curriculum to fit the notes”.

N also felt that the use of “PowerPoint” presentations and excessive reliance on virtual learning environments could lead to lecturers becoming “lazy”. In many cases it is more appropriate to tackle a live problem on the whiteboard to show students problem solving in “real-time” rather than just presenting it as a series of slides. The difficulty is that N feels that many QAA subject assessors would not see such benefits and mark down such a session as “chalk and talk”.

O was also worried about a possible over-reliance on the presentation at the possible expense of the content of the learning and teaching materials. He felt that if the “visuals” are too sophisticated and the presentation too rehearsed then the lecture or tutorial will lack spontaneity. The slides or overheads should act as little more than an aide-memoir for the lecturer. In this way the lecturer needs to be

“a catalyst, to see the sparks between the material and the students beginning to get the message”.

O also feels that there may be a danger that if the lecturer has invested too much time in the development of the presentation material she or he may be reluctant to change it, despite the availability of technology to make changes easy. He thinks that the outside environment was subject to change and so should the learning objectives. It was therefore essential that the lecturer keeps up to date and that this is reflected in the materials used.

One category of course materials that had not been anticipated as featuring strongly in these interviews was that of course and programme questionnaires. These were assumed to be part of the connecting holon “student feedback” in Figure 5.1. However, two of the interviewees, M and P, regarded such questionnaires as part of the course material. M expressed the strong view that appropriate audit trails were necessary which enabled issues to be raised by students to be followed to resolution. These would have a contributory effect on the quality of the student experience by reassuring them that any problems

would be dealt with. P agreed that a student evaluation process, which is seen to be taken seriously, could enrich the student experience. He commented that questionnaires and evaluations were commonplace in universities in America and staff there were encouraged to construct their own analyses of the results. He felt that this often meant that staff felt less sensitive about criticism and more willing to make remedial changes to the overall benefit of the students.

### *Assessment*

Most of the interviewees agreed that a lot more effort is now put into the development of coherent and defensible assessment strategies at the course planning and validation stages. As with the comments on materials, the successive quality assurance regimes of HEFCE and the QAA are credited as major contributors to these improvements. One of the cornerstones of the recent subject based quality assessments has been the need for departments to be able to demonstrate that there is an auditable link from the assessment back through those elements of the curriculum that are being assessed to the specific learning outcomes that those elements of the curriculum support. In order to be able to demonstrate the existence of this audit trail, members of academic staff have to spend more time on considering the most appropriate assessment vehicles for testing those learning outcomes. One of the aims of these clarifications is to enable students to know exactly what is being tested and this should prepare them better for tackling the assignment. L summarised this succinctly during her interview.

“Assessment used to be a bit of a guessing game (for the students)...but now that we need to show assessment matches curriculum that matches learning outcomes, much of the guessing is removed”.

She went on to link assessment to attendance by asserting that students need the confidence that attendance accompanied by learning and understanding means

that passing the assessment should be straightforward. She referred to some part-time business studies students that she taught.

“They had to get through the same content as the full-timers and have to sit the same assessments but in half the time. Attendance was never a problem and their pass rates were consistently higher than the full-timers”.

J reflected on the fact that it was important to prepare students properly for their assessments and quoted the Open University, which provides students with comprehensive guidance on how to tackle the assignment.

Interviewee I shared the view that assessment should be less of a lottery. His view was that assessment ought to relate to the learning outcomes that were appropriate to that level of the programme. As a consequence, pass rates ought to be consistent for the same group of students across all the courses at that level in the programme.

“The right amount of the right assessment should give students a fighting chance – the only problem may be over-assessment”.

J also commented on this issue as part of a discussion on the value of pass rates as a metric. She referred to the fact that many people thought that there may be “stumbling block” courses on some programmes and these courses were traditionally more difficult or alien to the student in terms of the other courses on their programme. She referred specifically to such courses as biological science in nursing programmes, maths in computing programmes and statistics in social science programmes.



During the discussions on assessment, another alternative representation of Figure 5.1 became apparent. A number of the interviewees felt a little uncomfortable with the placing of the external examiner holon. As with programme and unit guides, it is shown outside the main conformance-to-specification holon; indeed, it is not even within the departmental holon. Interviewee P felt particularly uncomfortable with this because he felt that there needed to be a greater role for external examiners to be “critical friends” to the department in order to help ensure adherence to national standards. He felt that external examiners “need to spend their time in discussion with course staff rather than simply rubber-stamping examination boards”.

### *Student Support*

All the interviewees acknowledged the importance of providing appropriate and adequate systems of student support. This is particularly important as the Government’s agenda for ever-widening participation is implemented. The result of this is likely to be an increase in the diversity of the student body, particularly in post 1992 universities. Such an increase in diversity is likely to lead to an increased demand for different forms of support for students, both academic support and support for other financial, domestic or personal problems. Beyond this, most of the staff interviewees did not appear to either want to or to be able to go into greater detail of what kind of support systems lead to an enhanced quality of student experience. Because the interviews were all conducted in a similar fashion and had been designed to be of loose structure, it was felt inappropriate to single out this issue for further probing using specific prompt questions. If the interviewees did not feel sufficiently motivated to explore the issue in detail, then one conclusion could be that they did not feel it was a major component of the teaching and learning experience. It could also be that they felt it best to deal with their view of support within the discussion of the other topics in the interview.

There were, however, three interviewees who were able to discuss the issue of support in slightly greater detail. It was K's view that there needed to be a properly structured and adequately resourced support mechanism to cater for the increased diversity of the student population. However, he was adamant that the main area should be academic support and that it was essential that this be built into a "skills module" to be introduced to students during the first semester of their course. The tutoring for this module would be undertaken by a group of staff that were experienced and acknowledged effective personal tutors, and this group would divide the cohort between them so that the tutor groups became their personal tutees. These personal tutor-tutee relationships would continue through level two of the course and be replaced by the system of project supervision at level 3. Binding the personal tutoring system into the course in this way prevented students (or tutors) from opting out of the personal tutoring system.

P agreed on the need for a strong collective will in the Department that sees personal tutoring as important. This would then give support to the development of proper systems and to the will to see that they were effectively monitored. He noted that there did not seem to be established procedures for the evaluation of personal tutoring systems or for asking students for feedback on them. He firmly believed, as did K, that a personal tutoring system is, in the first instance an extension of the academic role of evaluating and monitoring the student's performance, and that there is often a danger of it being "high-jacked" by the view of it just being about students' personal and financial problems. L also commented on the complexity of the issue.

"Support is difficult and complex, because it comes from everywhere. Students will seek out the most sympathetic lecturers and so the system is never transparent".

### *Virtual Learning Environments*

The use of information technology as a tool for the enhancement in higher education has been established for a number of years. There are also established practices in many institutions for the development of Departmental, programme, course or individual lecturer web sites where copies of the teaching material can be placed so that bona fide students can have ready access to it from inside or outside the university. The natural extension to such web sites is the adoption by an institution of a Virtual Learning Environment (VLE). This allows students to register as members of the course, gain access to course materials (which can include direct links to other web sites), complete registers, access course timetables, undertake assessments and obtain their marks and be able to access a number of other facilities.

Only three of the staff in the sample of interviewees had direct experience of using a VLE as part of their teaching and as a consequence, there were relatively few comments on this issue. O was sceptical about the added value of Virtual Learning Environments. He felt that it was important for them to “mirror the learning experience of the classroom” but there is a problem in that most people do not know exactly what that is. He felt that a valuable part of the delivery of material, and hence the learning experience of the student, was the “intonation, body language, eye-contact” of the lecturer and he wondered how you would replace that with a VLE. O also held the view that the increased use of VLEs was one of the contributory factors to poor attendance and this, in turn leads, in O’s opinion, to higher failure rates.

K was of the opinion that most VLE sites were at best vehicles for teaching and that they tended to ignore the concept of learning. L endorsed this saying that

“There can be a problem if lecturers are panicked into using them (VLEs) for fear of adverse scrutiny, possible redundancy etc.”.

If this is the case, then those lecturers cannot be embracing the concept properly and are only using the site to publish their course material. In fact, there has been relatively little research, according to L into the criteria for judging the quality of a VLE site. What little there has been indicates that most students like the fact that they have ready access to the content and this is not supposed to be the primary purpose of a VLE.

### *Student Expectations and Motivations*

The original intention for the interviews in the Enquiry Stage of the project was that they would be very loosely structured interviews based on the broad findings of the Framing Stage. The results of the Framing Stage were encapsulated as a graphical representation in Figure 5.1. This representation was used as a prompt for the interviewees to enable them to discuss those issues that they thought relevant to each of the sub-holons that formed the conformance-to specification holon in Figure 5.1. For the majority of the interviews, this approach worked very well and the results of those interviews have been summarised above under headings that directly relate to the sub-holons. However, it became apparent during the interviews that there were some issues that did not fit neatly into those headings. The best way to categorise these issues is by using the broad heading of Student Expectations (or motivations). This was an issue that arose during the Framing stage but a decision was taken not to incorporate its further investigation as part of the research. However, it would seem that the topic has, in a sense, returned to “haunt” the research and so the relevant comments of the interviewees are reported in this section.

K expressed the view that there had been significant changes in students' attitudes to university programmes.

“We went to university for the lifestyle experience not the product (the degree). It seems that now it is the other way round”.

He went on to express the view that university should appear to be “slightly elitist” so that people would want to go.

“There needs to be some distance that gives it a certain mystique and encourages people to make every effort to come and to stay”.

Interviewee I agreed with some of these sentiments. He commented that university used to be regarded as a privilege and carried the associated deference to the academic profession. He felt that now it is regarded as a right and the deference is no longer there. M was also in agreement. He thought that, as with all professions, there has been a change. Students were less inclined to regard lecturers as “god-like” and drew parallels with the medical profession.

L extended the argument into the area of market forces. She noted, “Wide access has coincided with students becoming far more critical customers. Therefore it is essential to “manage their expectations”. M expressed a similar view although in a somewhat more forthright way.

“Students know that they are in a buyers’ market and value-for-money is increasingly important...if they are unhappy, they will walk”.

There were also a number of comments that the student interviewees made that are appropriate to this heading and they will be reported in the next section.

## **Analysis of the Student Interviews**

### *Classroom Teaching*

In discussing the performance in the classroom, the students' placed emphasis on slightly different areas than the staff subjects. In particular, the views of Q and R, both of whom moved straight into pre-1992 universities straight from school could be described as fairly conservative. When discussing his experiences of the lectures he attended, Q commented,

“ It is tied up with the student's expectation and the tradition of the place. At X we knew we were expected to do well through our own efforts – we were, after all supposed to be the top 10%”.

Q had, through his own efforts and advice from careers teachers deliberately chosen his university for the reputation of its faculty staff within his chosen subject, history. He felt that the best lecturers were at the cutting edge of research in their subject and where they were clearly passionate about their research. This reputation seemed to matter more to Q than any qualitative assessment of the quality of the lecturer as a presenter of material. The only time that Q thought that there was a real issue was when lecturers used the lecture as a form of “soapbox”. He commented,

“Lectures were all traditional – some very good and some bad, especially when used by the lecturers to get particular bees out of their bonnets”.

R appeared to have been slightly more concerned than Q over the quality of the performance. She felt that students needed to feel elated when they walked out of the lecture and they needed to know what was subsequently required of them. This slightly contradicts Q's view that it was up to the students to be self sufficient but R went on to explain how problems could arise. She explained

that the lectures that she regarded as best tended to be those where she did worse in the assessments. This was because those favourite lecturers adopted an informal approach to the delivery of the subject but expected a formal approach on the part of their students towards the assignment. She illustrated this problem by noting

“...I wrongly tried to imitate their style when they were expecting drier academic arguments”.

The students all acknowledged that where lecturers made the effort to make their sessions entertaining this was generally well received by the students. R felt that

“Good theatre, amusing stories and general humour were important to us”.

U supported this view and thought it particularly important for her form of study.

“Humour and anecdotes help – they keep your interest and prevent you switching off and this is particularly important for evening classes”.

The graduates from colleges or from post-1992 universities seemed to place more emphasis on the personality or presence of the lecturer than their counterparts who had attended older universities. Only one of the interviewees, T made any reference to the subject expertise or standing of the lecturer and this was within a more general statement about the way that the students regard the lecturer. He thought that the lecturer needed stature – to be a role model so as to be able to inspire students; not to be a “bully-boy” but to exude the confidence of an expert in their field. S also took up the subject of the lecturer as a role model vigorously. She had returned to learning to study for a Higher National Diploma at a College and she felt that

“The best sessions were those I could relate to. For example those taken by a working mum lecturing in personnel management – a role model – if she could do it so could I”.

S felt strongly that the degree of empathy between lecturing staff and students was extremely important and that there should not be too much dislocation between the staff experiences and those of the students that they teach. This view was noticeably different from that expressed by the students from traditional universities who placed much greater emphasis on the lecturers standing in his or her subject.

The issue of the active participation again illustrated marked differences between those who had taken the “traditional” route (straight to pre-1992 universities after A level at the age of eighteen) and those who had returned to learning. Apart from Q briefly mentioning student participation in passing by stating that

“Students must not think ‘Am I too stupid to ask a question’”,

the issue was not raised by either Q or R. It would have been tempting for the interviewer to ask direct questions on this issue in order to gauge the views of Q and R, but to do so would have violated the general procedure adopted for all the interviews of letting the subject discuss those issues that they felt important under the broad subject headings. However, the topic of student participation in lectures was very much at the front of the minds of both U and V.

The main theme in the discussions on classroom teaching that emerged from both of these subjects concerned the lack of confidence of many mature students who are returning to learning and the intense pressure that they feel if active participation is expected. According to V



“the ability to join in classroom discussions and give presentations depends on your background and upbringing. It’s all about confidence – the same way that posh people always talk loudly because they think everyone wants to hear them”.

U agreed that confidence was an issue and felt that it was important for the lecturer to be able to understand the feelings of the group. She felt that with mature students it was important to use “ice-breakers” to build confidence.

This apparent fear of participation covers both prepared formal interactions, such as presentations and the more informal question-and-answer form of interaction. According to V

“I know that you have to give presentations but it is not fair because some students find it more natural than others”.

U was also concerned about the pressure that students feel when their peers seem to be far more confident and competent in classroom interaction.

“If other people speak up a lot, they always seem more articulate than you and it makes you feel even worse”.

V related a situation that many people encounter but felt that it was in some way more difficult for students in her situation.

“Sometimes you want to ask a question but you wonder whether it is stupid and if you’ve missed something. Then someone at the back asks the same question. That should make you feel better and more confident but somehow it makes me feel worse”.

### *Tutorials, Seminars and Laboratory Sessions*

When discussing non-lecture sessions, which included tutorials and seminars similar differences emerged between the subjects who had taken the traditional route into higher education and those who participated as mature students. The former group hardly mentioned the issue of interaction or participation and appeared to regard it as perfectly natural and something for which they were prepared. According to Q

“Although the lectures were formal, the tutorials were less so and by nature much more interactive. But we were expected to have done the preparatory work and this was tested”.

His only difficulty appeared to be with fellow students who perhaps participated too much.

“If the student is talking significantly more than the tutor maybe there is not enough questioning to get the students’ thinking focussed”.

Again, with the mature students the issue of participation and interaction seemed to be a matter of concern. The depth of feeling on this issue was a surprise and a shock. According to U

“If they’d have said I had to do presentations in the prospectus I probably wouldn’t have enrolled”.

Although some of the staff interviewees spoke about the need to build confidence in students, it is not immediately apparent that they are aware of how deep this lack of confidence can be in some students.

T acknowledged the use of tutorials in enabling the group to explore a topic in greater depth, and that a standard method of achieving this was through the tutor introducing a topic and asking questions of the students or getting them to discuss the topic. However, he noted that students often did not want this as they may feel intimidated and “picked on”. U also raised this as an issue and referred to her experiences at one of her summer schools.

“The worst thing is if the tutor goes round the class asking you to do things in turn. You are so worried about getting your own bit right that you don’t pay any attention to the other students’ input. And this really defeats the object doesn’t it”.

In U’s case she has a point.

This lack of confidence for active class participation on the part of some students can be reinforced as the classes proceed. According to U,

“It’s difficult enough building up the courage to say something but it can be quite devastating if someone challenges it in an unsympathetic way.... especially if that someone is the tutor”.

However, V volunteered some evidence that there are ways to overcome these problems of lack of confidence among some students.

“The sessions that I got the most out of were those where I didn’t feel nervous about responding. Those were the sessions where we worked in small groups and it was the group who responded to the rest of the class. Even if I had to be the speaker, I knew that the group was behind me and my views were reinforced”.

Both U and V emphasised the importance of not feeling intimidated within their tutor group and the need to feel at ease. According to U,

“The most important thing is to feel comfortable with your group. This is much easier if there are a number of students in the same boat”.

They were sympathetic to the tutor’s dilemma in trying to achieve group interaction because they felt it would be of benefit to the students. They also acknowledged attempts to help break the ice but unfortunately cited instances where this went far from smoothly. V felt that the worst approach with a new group was to ask everyone to talk for “five minutes” about themselves. V related in the previous section the difficulty of this for people from backgrounds where the confidence and skills for this form of self-presentation did not naturally develop. U related a similar unfortunate experience but with an unforeseen outcome.

“We had an exercise in the first session where we had to ask our neighbour questions and mark their responses. This caused some antagonisms and bad feeling that went on through the whole course”.

The point that U was making concerned one particular individual who had been “marked down” as part of this process had appeared to bear a grudge for the rest of the course against the fellow student who had marked her.

### *Course Materials*

The group of student interviewees had experiences in terms of course materials that differed between the traditional route students and those returning to learning. Both Q and R did not appear to have received a great deal in terms of either printed material prepared by their lecturers or tutors or in terms of copies of overheads or slides. However, neither felt disadvantaged by this. According to Q

“We did not have a lot of course material. We took lecture notes and were referred to books and papers. We read for a degree”.

R appeared to have experienced a similar approach but was reasonably supportive of it. She thought that people tended to underestimate the learning effect of taking lecture notes.

The views of the mature student group differed. However, it was not clear whether this was due to their circumstances in that students returning to learning may lack the skills appropriate to get the most out of taking lecture notes, or due to the fact that they had received more comprehensive materials than Q and R and therefore felt that that was the norm. S certainly felt that comprehensive printed notes circulated by the lecturer were the most important, particularly in the early part of the course and doubted that at that time he would have had the skills or confidence to find material in the library. V expressed the same view when discussing an Art History module.

“Although the study notes were excellent, the tutorials, where good quality slides of the paintings were presented, made them come to life”.

T felt that it was particularly important to provide adequate material to support laboratory classes. His computing practical classes were far more successful when the lecturer had given clear guidance on the nature of the practical or of the features that were being explored. U commented on the fact that the possession of comprehensive material distributed to support the lectures gave a sense of security.

“If they gave out plenty of notes it certainly helped in that if there was something I didn’t quite understand, and felt I couldn’t ask in class, at least I had lots of notes to fall back on”.

## *Assessment*

The comments of the student group on the topic of assessment could be categorised under the areas of specification, performance guidance and feedback. R had commented earlier about the miss-match between the subjects that she liked best and the grades achieved for those assignments. She thought that she did not adopt a formal enough approach to the assignments. Part of this may have been due to inadequate assignment specification where they were not at all clear and there appeared to be inconsistency among the markers. V had the opposite experience.

“One thing about the OU is that they leave you in no doubt what they want for the TMAs (Tutor Marked Assessments). The subject is clearly laid out and in all of my courses there have been a number of paragraphs telling you what issues to address in the assignment, and sometimes, the exact sources to refer to”.

U also put great emphasis on the need for comprehensive assignment specifications. She felt that it was the lecturers' responsibility to make it clear to the students what the assignment is about and what is expected of the student. She also went on to say that it was important to guide students on the features of a typical assignment of different classifications.

“ It was helpful if they made it clear that a pass mark would be awarded for addressing these issues, a third class will address these and also... and so on to specifying what a first class pass would look like”.

The comments of T on the need to specify practical laboratory sessions clearly were also directed to assignment specification for practical as well as “theory” assignments.

The student group also reported the importance of feedback on assignments submitted. Q had quite variable experiences in this area.

“Sometimes the feedback was very good through annotated returned work and through tutorials which comprehensively reviewed the assignment and our attempts at it. With others, all you got was the mark”.

V was generally happy with the feedback given although was at pains to point out that it was important to be able to have access to the tutor in case there was a need for clarification of any of the comments made.

The timing of the feedback was also important with a number of the students emphasising the need for prompt feedback so that they could learn from any mistakes and prepare better for the next assignment. Again there was evidence of some variability on this issue. According to R’s experience, most were returned within a reasonable time but there were some that were “not returned all term”. Even V, who was under a fairly rigorous regime of dates of submission of assignments and expectations of return, experienced some variability.

“I’m always nervous when waiting for the TMA to come back to see what I’ve got. But it gets worse the later it comes back”.

### *Student Support*

With the student group there appeared, once again, to be different views expressed by those who had taken the traditional route into higher education from the other student subjects. Both Q and R saw little need for support

although it was not clear whether this was because its availability was limited or because they felt that they did not have need of it. Both made the distinction between the academic support that they received through tutorials and other support provided by a personal tutor or other support services. They both felt the former was essential but that the latter was of less obvious value. According to Q, he only saw his personal tutor about once a year and that was to get his results. R did not avail herself of general support services. She said that she developed a circle of friends that she stayed with throughout the course and that they tended to talk to each other if they had any problems.

The attitudes of the other group differed. S felt that it was very important to know that there was support available if she had started to run into trouble either academically or with other problems that may have adversely affected her college life. S had felt it important that lecturers had empathy with their students' situations and she had particularly related to a lecturer who was, like herself, a working mother and felt particularly comfortable that this lecturer would be available for her to approach with any kind of problem.

It is often the case that different forms of support need to be provided for different groups of students. U studied through evening classes at her university. Many of the support functions for full-time students (literacy support, numeracy support, financial advice etc.) were not available for students in the evenings. Consequently, U and her group tended to rely more on the lecturers for support and, if they had any difficulties, they would approach the lecturer during the coffee break. U was quite happy with this approach and, although not encountering any major problems herself, she was confident that it was an effective system.

With V's courses the availability of the tutors for face-to-face meetings varied. On some courses, there were seven or eight tutorial meetings whereas on others there were just one or two. However, tutors were available to contact by telephone during designated hours. Despite this, V still felt a little reluctant to



contact a tutor directly in all but the most “desperate” situations, preferring to use email instead.

### *Virtual Learning Environments*

An explanation was given above about the choice of the group of “student” interviewees, who were in fact graduates or past students. The justification for this resulted from comments in the framing stage of the project that alluded to the fact that some of the benefits of higher education were not apparent to students until some time after the completion of their programme of study. This seemed a reasonable approach but it did have one unforeseen drawback which affected the evaluation of Virtual Learning Environments. VLEs are a relatively recent addition to the armoury of higher education and the majority of students currently on university courses probably have not experienced their use. Certainly none of the sample of graduates interviewed for this project had experienced the use of VLEs and so there were no comments to report.

### *Student Expectations and Motivations*

The students who had followed the traditional route into higher education had a number of comments that fell into this category. In both cases they were not the first in their family to attend university and so they had access to knowledge about what certain aspects of university life were like. The comments made by Q related to university life in general while R concentrated more on her expectations of the subject matter that made up her degree programme.

Q felt that, although the study of his subject to degree level and beyond was important, he and his contemporaries also saw higher education as a general experience.

“We went to university for an interesting life experience...a kind of rite of passage before getting a job”.

He was quite clear as to why he chose his particular university and course and it was because of the reputation of the academic staff in his area of study. He felt, on the advice of teachers and through access to other sources of information that the members of the faculty staff were all at the top of the hierarchy in their subject. He felt that the general university experience was not the responsibility of the staff alone.

“The significant experiences were those you made for yourself – the people in and around the university – your peer group”.

The expectations of R also included fairly clear views of what the subject matter of her degree programme would be. She felt that expectations of university usually result in disappointment, not least because the subject itself can be significantly different from what is studied at school. She had studied geography and was commenting on the fact that a great many of the aspects of the subject that she liked at school during her Advanced level GCE course were not there in the university programme. Moreover, they were replaced by less popular topics such as mathematics.

“The worst disappointment is the lecturer who kills your favourite subject”.

However, she blamed insufficient attention to induction as adding to these disappointments. She felt that much of the disappointment could be overcome if there were better induction programmes focussing more on subject issues as opposed to university life in general.

Needless to say, the expectations of the mature students were more uncertain. Although she returned to study at a college as opposed to a university, S still had the impression that all the other students in her group would be eighteen years old and that she would feel left out. She was relieved that the class was a

very mixed group in terms of age, gender and ethnic background. If she had known that prior to starting the course, she feels that it would have been a less traumatic experience. The worry of being the odd one out also affected U. She deliberately chose to attend a specific return-to-learning class at her local university because by its very definition it would comprise of people like her. She also felt that some of those fellow returners might progress with her on to her degree programme.

The expectations of V about her fellow students were fairly clear due to the publicity given to her institution and the methods of study that it promotes. Where there was a miss-match in her expectations, however, was over the amount of work in each course and the intensity of study.

“The work takes up an awful lot of time; far more than they indicate in the booklets. I sometimes wonder whether it is really more geared to people at home or in part-time, rather than full-time, employment”.

### **Emergent Themes and Possible Metrics**

The sections above served to analyse the material captured over the fifteen interviews each of which lasted between 60 and 90 minutes. Despite the fact that the exercise aimed to draw out the main issues that the interviewees thought contributed to a quality teaching and learning experience for students, some further extraction is required before the metrication stage is entered. It is necessary to draw together the issues raised by both groups of interviewees in order to define those issues where metrics may be suggested that could lead to performance indicators. In the majority of cases, the staff view of what constitutes a quality experience will be congruent to the views of the students. However, even in cases where this may not be so, it may be useful to proceed towards the suggestion of a metric which may help support further investigation of any opposing views. At the end of this section, there will be a list of possible metrics that can be carried into the metrication stage. They will then be tested

by discussion with a subset of the original interviewees to see whether they are feasible and whether they would be likely to be acceptable.

### *Classroom Teaching and Tutorials*

These two areas have been merged because most of the issues raised by both staff and students relate to both areas. It is also the area where a major difference of opinion appears to exist between the staff and the majority of the students.

All the staff expressed the view directly or indirectly that there was a need to achieve a balance between the formal aspects of presentation of material and more informal approaches. They went on to express the view, that is common within the higher education profession, that it is important for students to participate fully in learning and teaching through interaction with the lecturer, the material and their fellow students. This is seen as important in that it is felt to aid the learning process by requiring students to understand fully the material before being able to re-present, argue or question it. It is also important because the ability to argue a case, to debate and report issues, to present findings of an investigation, a piece of work or an experiment orally as well as in writing are seen as important graduate skills which are in demand by employers and other stakeholders (QAA, 2000; QAA 2000b; QAA 2000c).

A number of the staff interviewees acknowledged that the ability to engage in these activities was very difficult for a number of students and that this has become an increasing problem as access to higher education has widened and the student population has become more diverse. The staff acknowledged that the environment must not appear threatening to students nor must it make them feel culturally alienated due to their prior forms of learning. They discussed at length the need to encourage students, to build up their confidence and to help them develop the necessary skills in order to be able to participate fully in the learning process.

The interviews with the students, especially the mature students, indicated that the problems faced by students may be more severe than the staff realise. The statements made by the students indicated very real feelings of fear, of intimidation and of feeling “picked on”. Indeed, some of the very techniques used by staff to try and “break the ice” often tended to add to the negative feelings of these students. Even where the students are in a group containing colleagues in a similar situation as themselves, the lack of confidence in their ability to interact effectively is marked.

A dilemma has therefore been identified. The received wisdom about what constitutes a quality learning environment, and the type of learning environment that many quality assessors would applaud, actually produces a poor quality experience for a number of students. However, the dilemma has to be confronted because it is difficult to justify the award of graduate status to students who are unable to display the skills referred to above.

Emerging from this discussion is a potential metric. If interaction between tutor and students is regarded as an important component of a quality learning experience then some form of measure of the proportion of the tutorial time that the tutor was speaking against the proportion that the students were speaking is a potential metric.

It is important, at this stage, to speculate on the nature of such a metric. In the interviews with the staff, there appeared to be strong indications that tutorial sessions and, in some instances, lectures were more productive learning experiences for the students if there was significant interaction between students and the tutor. One interpretation that could be put on the interviewees’ responses was that an equal distribution of the time that the tutor was speaking and the time that the students were speaking might be a target to aim for. Of course, this may be too much of a generalisation because tutorials do differ in nature, depending on the learning outcomes that they aim to satisfy.

Some tutorials, especially those on final-year honours courses and masters courses may require students to deliver a presentation on a piece of research that they had undertaken. The presentation would be followed by questions and/or discussion involving the other members of the group as well as the tutor. In the case of these tutorials, the majority of the speaking time would be attributable to the students and one could argue that the target mix for such sessions may be approaching 100% student speaking time. Other tutorial sessions may be geared towards the feedback to students on a previously submitted assessment. For this type of tutorial, it would be natural for the lecturer to occupy most of the speaking time, presenting a summary of the lecture and responding to questions from the students. A target mix for this type of tutorial may be around 80% lecturer speaking time.

The actual metric itself, could be a single figure that indicates the proportion of the session time that the students were speaking or, as an alternative, there could be two measures one being the proportion of time the students were speaking and the other, the proportion of time that the lecturer was speaking. The advantage of using the two measures is that it takes into account “thinking” time when neither party is speaking. However, introducing two metrics adds a further layer of complexity to an already difficult area. The major difficulty is how one would take the measurement. The most obvious way would be for an observer to the session to categorise and time each observation in a similar way as that undertaken in work-study exercises (Voss et al, 1985. pp. 229-233). This method is very costly because of its labour-intensity but, classroom observations by a reviewer or an inspector are a feature of a number of quality assurance systems and the timing could be done as part of the observation process. An alternative approach would be to videotape the session so that the measurement of the interactions could be subsequently undertaken “off-line”.

In testing the feasibility of the metric as part of the next round of interviews, the emphasis will be placed on its feasibility as a metric rather than the issues around the practicality of taking the measurements.

Another issue emerging from this section of the interviews concerned the degree of subject expertise or standing of the lecturer. However, there was by no means a consensus on the importance of this (possibly because subject expertise is taken for granted) and, in any case it is difficult to propose a metric for this aspect. However, the standing of the lecturer may, among other things contribute towards the students' willingness to attend lectures and tutorials; indeed, one of the student interviewees alluded to this. Despite the uncertainties caused by the introduction of Virtual Learning Environments, most of the interviewees regarded attendance as an important factor.

There does not appear to be a unanimous view within the higher education community, on the issue of student attendance at lectures. The taking of registers of student attendance used to be a feature of a number of courses in the former polytechnics, such as London South Bank. However, these were mainly part-time courses, where the student sponsors (normally the student's employer) expected detailed feedback on attendance during the student's day release periods. As a consequence, fairly comprehensive registers were kept and reports made on a termly basis to the employers. Throughout the 1990s, fewer employers insisted on the collection of this information and the system was abandoned. When student grants were awarded through the local education authorities, institutions had to confirm the continued attendance of students, to ensure continued payment of the grant, but detailed registers of attendance were not required by the local education authorities. The introduction of student loans carried with it a requirement of the institution to confirm the attendance of the student holding the loan but again this did not require detailed register information to be sent to the student loan company.

There are some university programmes where student attendance forms part of the assessment criteria in that it is regarded as an essential part of the course. Many nursing and para-medical courses fall into this category with a requirement on the student that they attend a minimum number of hours on, for example, hospital wards. There are similar requirements on some hotel management programmes where work experience in a hotel for a minimum time is an assessment requirement.

The vast majority of programmes that I have seen as an external examiner, validation panel member and QAA reviewer have no requirement for attendance by the student; they attend “voluntarily”. If irregular or non-attendance is detected, the student is followed up to find the reasons, but they are rarely penalised unless through their non submission of an assessment.

For these programmes, it could be argued that students will be more willing to attend those lectures that they felt contributed to their learning experience. In other words, they would be less inclined to attend lectures where they felt that the quality of the learning experience was poor. If this is the case then it lends itself to another potential measure; overall attendance rate of the course in question.

One of the interviewees referred to the fact that, when faced with a choice of options, students may make that choice on the basis of their liking for the lecturer as much as on their liking for the subject. Running programmes that incorporate option choice is much more expensive in terms of resources than programmes where all the courses are compulsory. In subjects whose “popularity” has apparently declined, resulting in reductions in the numbers of students enrolling on those courses, it becomes increasingly difficult to offer a large number of options. The reason for this is that a small cohort, when split between a number of options could result in class sizes too small to be viable. This would then mean that students would be forced into viable options that may not have been their first (or even their second) choice. Consequently there



are programmes (such as all the engineering programmes at London South Bank University), where programmes now consist of almost all compulsory courses.

However, for programmes that retain an element of option choice the issue of why students choose a particular option remains pertinent. Some programmes contain “streams”, such as a BA Business Studies (with marketing). In such cases, the option choices are linked into a package so that if a student chooses to take the marketing route then they have to take all the courses associated with that route. Other programmes may offer less restriction on choice or even the possibility of the “free elective”. It is really only the courses on these programmes where the student may base their choice largely on the lecturer rather than exclusively on the content of the course. Where there is option choice on a course and again it is at first sight possibly controversial; the popularity of an option (possibly ratio of applicants to places) may be considered as a measure of the quality of the lecturer and/or the classes. This would have to be treated with extreme caution. One of the reasons for the popularity of a particular lecturer may be that he or she is regarded as a “soft touch”. In other words, that lecturer may consistently produce high results from a programme of study that is not particularly taxing for the students. Such a situation should, of course be picked up by other parts of the quality assurance process but it is a factor that needs to be taken into account.

### *Materials*

The majority of the staff interviewed acknowledged that there has been a significant improvement in course materials over the past ten or so years. Various reasons were suggested for this and, on the whole it was welcomed as a positive development. A number of the students also welcomed comprehensive course materials being distributed and high quality overhead slides or other visual aids forming part of the presentation. The two negative issues presented were the possible over reliance by lecturers on a “slick” performance which

may result in a certain amount of laziness on the conduct of the class and a continuing reluctance to use materials not developed by the lecturer. In many other industries, the use of standardised components is seen as a means of ensuring quality. It could be argued that a similar situation could arise in higher education.

One of the best examples of the benefits of the use of standardised components comes from the software industry, where there have been significant moves towards the re-use of software components wherever possible. Errors in software, like errors in teaching and learning programmes, are not always obvious or visible. However, as the components are used, errors appear and are corrected. The corrected version is released to the users and if more errors occur, the process is repeated. As a consequence, the more a piece of software is exposed to normal use, the more error-free it can be thought to be.

A similar phenomenon occurs with teaching material. A new course, when delivered to the first group of students may be found to contain errors or inefficient ways of getting points across. The lecturer will reflect on that particular presentation and make corrections to the material or the delivery. This may result in other errors to be corrected as a result of the second presentation but, over time, the majority of the problems should be ironed out. One possible conclusion is that the greater the exposure of material and its delivery to different classes, the greater the likelihood of it being error free. And being error free is an important measure of the quality of a product.

Assuming that the libraries of standard presentation or distribution material were vetted in order to assure their quality, then their use might be assumed to improve the quality of the experience. This is a controversial area but it does suggest a possible metric; the proportion of standardised material used as part of the course. The general view of the students indicated that it was the quality (and often the amount) of the material that was important and not its origin.

There are two difficulties with this proposition. The first is the suspicion that the majority of lecturers would prefer to develop their own material. In the interviews, both N and M referred to a “not-invented-here” syndrome that would be a barrier to the wider-spread adoption of standardised material. This can be regarded as understandable in that academics are trained to develop their own thoughts in their own words and there is a deep-seated antipathy, in the academic community, of anything that could conceivably be thought of as plagiarism. The second difficulty is that the use of good, standardised material might preclude some excellent material being developed by a lecturer, which could enrich the standard libraries.

Student questionnaires also featured as part of the discussions under this topic. In general the use of questionnaires at either programme or course level (or both) was supported and reference was made during the interviews to its widespread application in other countries. There has been much work done on the use of questionnaires to measure specific issues, such as the amount and difficulty of coursework to overall measures of student satisfaction (Brannigan et al, 1992, Haskins, 1993).

There have been various developments that have taken place since Brannigan’s initial projects, much of which has been influenced by the adoption of the notion of the student as a customer. These have included the development of student charters, the development of questionnaires at programme and course level and the recent pilot of a national student survey (HEFCE, 2004, pp. 1-29).

The mechanisms for students to feedback their comments on the quality of their learning environment feature strongly in the latest methods of both subject review and institutional audit. The mechanisms that are looked for include the use of course committees, where a representative group of students meet with members of the teaching team on a regular basis to provide feed back from the student group. These meetings are normally expected to have had minutes taken

so that the follow up to required action could be dealt with at subsequent meetings.

Other procedures for obtaining such feed back focus on the use of questionnaires. These can be conducted at both course and at programme level and typically consist of a number of closed questions, often supplemented by some more open-ended questions. With the closed questions, the students are asked to rate particular aspects of their course on a scale, either a numeric rating such as 1 to 5 or they are asked to specify their opinion on a scale running from excellent to unacceptable with varying degrees of granulation. Closed questions are relatively easy to process and analyse. The questionnaire can be designed in a way that it can be read directly by a computer using optical mark recognition techniques (Clare, 1986, p39) and this allows the data from a large number of forms to be collected quickly and accurately. The processing is also relatively simple in that it involves the calculation of standard statistics such as averages and proportions. The use of open questions has advantages in that it allows the respondent to express his or her concerns in a free form way, allowing expansion of points that is not possible using closed questions. However, as a consequence, they are much more difficult to process and analyse in that they require some degree of interpretation and categorisation and this necessitates human processing.

One consequence of the flexibility available in both the design and the interpretation of the results of questionnaires is that there is a lack of standardisation. The National Student Survey project attempts to address this through the development of a standard questionnaire whose core questions would be put in the same format to students from all institutions. If successful, it could result in one or more student satisfaction metrics that can act as a measure of the quality of the learning experience as judged by the students themselves. It could be argued that this is the only metric that is important, and its conversion into a performance indicator with target values, possibly adjusted to take account of local conditions, subject mix etc. would satisfy the aims of

this project. However, this view ignores the other customers of higher education services (Clare, 1995, pp. 442-3).

### *Assessment*

On this topic there was general agreement among the staff interviewees that the treatment of student assessment has improved to a significant extent. A number of suggestions were made as to the causes of this improvement but the results were acknowledged. These were that, in general, there appears to be much more thought on the part of course teams about the overall assessment strategy for their course and a greater importance is attached to the demonstration of assessment being a test of the stated learning outcomes for the course. The students also supported the view of the importance of clear and unambiguous assignment specifications.

Among the improvements have been the development of more sophisticated systems of moderation and external scrutiny. The Quality Assurance Agency in the UK has certain expectations of the security of the assessment processes in institutions and many have probably adopted systems and procedures, which meet the QAA expectations. Measures that are regarded as safeguarding the security of the assessment process include internal and external review. As coursework assignments or examination papers are set, there is often a system of internal moderation where other members of the teaching team review a lecturer's questions to ensure that they are unambiguous and that they satisfy the stated learning outcomes for the course. Once the students have completed the assessment, and the setter has marked the work, there can be a system of second marking all or a representative sample of the work. In addition to this internal moderation, the external examiner is similarly involved in scrutinising the assessments before they are set and samples of the marked assignments or examination scripts after completion of the assessment.

One of the key concerns to be addressed in quality assessment centres around the learning outcomes for the course. Learning outcomes must relate to the overall aims of the programme of study. In turn, the curriculum studied must relate to the learning outcomes so that by studying that curriculum, the students will be able to meet those learning outcomes. The assessments are designed to test the students' knowledge and skills developed as a result of studying the curriculum and so the assessments can be related directly back to the learning outcomes for the course.

A logical conclusion that leads from such an approach being adopted by course teams is as follows. If appropriate learning outcomes have been set for all courses at that level of the programme, and if the assessment strategy is consistently applied so that all assessments test those learning outcomes and nothing else, then the pass rates across all the courses for that group of students should be largely similar.

This assumes that the students recruited to the course have the necessary pre-requisite qualifications, skills or experience to enable them to cope with the programme of study. It is also predicated on the correct learning outcomes being set for each level of the programme according to the appropriate qualifications framework. However, it is a line of logic that can stand up to scrutiny. However it is a line of logic that does meet resistance in the academic community with examples of difficult areas or "stumbling-block" courses being cited.

The possible existence of these courses was referred to by interviewee J. These are courses that are deemed necessary for students following a particular programme of study but are not viewed as part of the mainstream programme by the students and often require different skills and knowledge in order to meet their learning outcomes. Mathematics courses, which are necessary for computing students to understand the underlying algorithms and data structures, are often regarded as stumbling blocks by students and lecturers alike. This is a

difficult issue because, as a result of my own experience as an external examiner, I have witnessed many occasions where students on computing courses have actually liked and performed well in mathematics course. Although I have not subjected this to any rigorous research, this phenomenon was not restricted to students who had particularly good qualifications in mathematics.

Another factor sometimes referred to is that of a particularly “bad cohort” as an explanation for low marks on a particular course. However, if there is such a thing as a bad cohort, then it is likely that performance would be similarly bad across all the courses in the programme. Consequently the pass rates should be similar. A further difficulty concerns the notion of an assessor who may set assignments or examination papers that are less difficult than those on other courses in the programme. If this were the case then the results for that course would appear to be better than those on other courses and may lead to a conclusion that this course is of higher quality. However, if the moderation processes described above are operating effectively, any assignments that are “too easy” should be picked up either internally or by the external examiner.

However, despite the reservations outlined above, a metric will be proposed for the purposes of this research. It is the pass rate of students on the course.

An important issue for a number of the students was the quality of the feedback given on assignments. This related both to the amount of helpful feedback given but also the speed of the feedback.

Effective feedback is important for a number of reasons. It can act in a formative way in that comments on a student’s work can help point out how the student can improve their knowledge or skills by pointing out the deficiencies in the assignment. If this guidance is given in a timely way, it can help the student to prepare better for subsequent assignments. Another reason for the importance of feedback lies with the mark itself. This gives the student an idea

of how well he or she is doing both in comparison with their classmates and against the benchmark of what is required in order to achieve a certain degree classification. Feedback from assignments can also provide a focus for subsequent tutorial sessions held either on an individual or a group basis. For this reason, the individual feedback given on a student's assignment can be supplemented by a more general feedback sheet commenting on how the group performed as a whole.

The quality of the feedback was considered in various ways by the interviewees and by many QAA reviewers. Indeed, the quality and consistency of feedback on assignments has been a feature of all the subject review visits that I have been involved with. The timeliness is important. Many departments produce guidelines for students indicating how quickly students can expect marked assignments to be returned. As well as being considered part of good professional practice, it is important that the return is within a reasonable time for the formative reasons outlined above. It is also important that the feedback given to students is sufficiently comprehensive. Guidance needs to be given on where a student has gone wrong or on how they could improve their performance. Consequently, comments such as "could do better" are less than helpful. Finally, consistency of feedback is important. All students in the group should expect the same level of detail in their feedback and there should be consistency across different assignments on the same course. It is difficult to suggest an effective measure for the comprehensiveness or the consistency of feedback. However the speed of the feedback, in terms of assignment turnaround time could be a possible metric.

### *Student Support*

For a number of the staff members interviewed, comments on this area were not particularly forthcoming. However, for those that did choose to comment some consistent views emerged that were supported by some of the student interviewees. There was support for a well designed system of student support,



properly integrated with the study programme and fully supported by the department and the institution. Most of the members of staff responding to this area, concentrated their comments on the value of effective personal tutoring procedures.

Personal tutoring can deal with a number of different issues that a student may have, but these can generally be categorised as either academic or pastoral. The former is concerned with difficulties directly relating to the student's academic performance and may focus on issues such as a failed assignment or the student's lack of understanding of a particular topic. Although there are some institutions or programmes that routinely feedback assignment results via a personal tutorial, the majority are reserved for specific student difficulties. Pastoral tutoring covers a wide range of problems relating to non-academic issues that nevertheless can have a significant effect on the student's academic performance. Within this category fall accommodation difficulties, financial difficulties and a variety of other problems.

One of the features of most personal tutorial systems is that the uptake of the service is variable. There are some students who never feel the need for a personal tutorial because they do not experience problems that cannot be solved in class sessions or through discussion with their peers. Some, less fortunate students make excessive use of their personal tutors and other support services provided by the institution. Perhaps the even more difficult cases are those students who, according to all the available evidence, should be making use of their personal tutor but are reluctant to do so. As most systems of allocation of personal tutors are not geared to the perceived needs of the student but more likely to be done on an alphabetic basis, the amount of work in terms of sessions to be held is difficult to forecast. A further factor is the drive towards higher participation of people in higher education and the consequent need to widen access. A result of this is likely to be an increasingly diverse student body, consisting of fewer "traditional" students, which in turn, may mean a wider variety of student problems requiring a personal tutorial system.

If such systems are set up then it is important that they are monitored in order to determine their effectiveness. Effective student support does contribute towards some general measures, such as retention rate, with the view that effective support systems identify quickly any student facing difficulties. For example, a student attending a personal tutorial may be able to get help in understanding some key element of the course, may be given guidance on how to remedy a failed coursework, or may be directed to some specialist support to help alleviate some financial difficulties that would have caused the student to withdraw from the course. If any of these difficulties had not been picked up, it may have resulted in the student failing or withdrawing from the course and that in turn would reduce the course retention rate. Remedial action can then be taken and as a result, the student is helped to continue on the programme. However, it may be possible that some more direct, local metrics could serve to measure the effectiveness of the support and by implication, the quality of that support.

There was some peripheral discussion in the interviews about the fact that some lecturers appear to be “natural” tutors in that they appear to relate better and more sympathetically to the students than some of their colleagues are able to do. Such tutors could be assumed to have a high rate of attendance by students at their tutorials and this may lead to the assumption that attendance rate may be a measure of the quality of a personal tutor. However, there are two difficulties with this line of argument. Firstly there is the issue of the assignment of tutees to tutors. As this is often done semi-randomly, it could be that a particular tutor, who is regarded by peers as one of the excellent personal tutors, is assigned a group of students who experience a trouble-free passage through their programme. These students would see no need to attend a personal tutorial session. Secondly, and paradoxically, the tutor may be so good that he or she solves all their students’ problems in the first session resulting in the students having no need to attend further sessions. In fact a less effective tutor could experience more student visits because he or she is not helping solve the students’ problems.

Notwithstanding the above reservations, there are two possible measures that could be considered under the heading of personal tutoring. These are:

The number of personal tutor appointments set up per student per year

The proportion of personal tutor appointments kept (by staff or student).

### *Virtual Learning Environments*

The comments on this topic were exclusively from the staff for the reasons outlined above. A recurring theme was that the profession still has a lot to learn about the effective use of these tools. In particular, the way that they can be used effectively to support and to complement more traditional forms of teaching is still the subject of investigation and exploration. An especially difficult area is the view that VLEs may in some cases have an adverse effect on classroom attendance if the students think that the VLE is comprehensive enough to provide all the material (and, it is assumed, the teaching) that they need.

Difficulties stem from the fact that the use of VLEs is still very much in its infancy. Even if one ignores the possibilities of migrating a VLE into a Managed Learning Environment, that incorporates aspects of academic management as well as presentation of material, there are still a variety of ways in which a VLE can be used. At one extreme of the spectrum, a VLE site can be built to deliver the whole of the material of the course, including the assessments as a form of e-learning. Such a use would involve very limited face-to-face contact between the students and the lecturer, similar in operation to conventional distance learning programmes. At the other end of the spectrum, the VLE is used to supplement or support a course delivered in the conventional face-to-face mode. This way of using VLEs is probably the most common at the moment with the system being used to store copies of, for

example, PowerPoint slides, supplementary notes and assignment details for easy access by the students.

The use of VLEs, often by students at a distance from the university is another example of access to services via the Internet. When assessing the quality of web sites, there are two dimensions that are most consistently used. The first of these is some form of judgement on the aesthetics of the design of the site and the ease of navigating and using it. Such assessments are necessarily subjective and suffer from the same difficulties of qualitative assessment discussed earlier in this thesis. However, the second dimension is a quantitative and is the number of accesses or “hits” on the website in any given time period. The theory is that the greater the number of hits, the more popular the site is and this can be taken as a proxy for the quality of the site. This line of argument does have its critics in that a popular site need not necessarily be of high quality in either content or design, but number of hits has become a standard measure of the success of a site in the world of e-commerce. In considering these views and the reservations, a possible measure does emerge; the number of accesses to the VLE per course presentation.

### *Expectations and Motivations*

This was the category that was set up as part of the analysis of the interviews to capture issues that did not appear to fit easily into the other categories. There appeared to be general agreement among the staff that the attitudes of students appear to have changed in that they now seem to be more like informed customers of a product rather than participants in a particular lifestyle.

The notion of the student as a customer, despite the anomalies with this view, could be considered as one of the main drivers towards the consideration of adapting systems of quality assessment and management from other environments for use in higher education. Indeed the use of terms such as “fitness for purpose” and “conformance to specification” emerged from the

literature review and has been a main theme of this research project. In service industries many providers look to the customers to participate in the measurement of the quality of the service provided. In doing this, they attempt to manage the customer expectations through the development of service level agreements that are intended to specify as precisely as possible what the customer is entitled to expect (Voss et. al., 1985, p54). Within this, it is acknowledged that customers often participate in the delivery of the service and any service level agreement has to take this participation into account. This aspect of participation has direct parallels in higher education where the student of necessity participates in the delivery of the service, however minimally.

An organisation may strive to develop as sophisticated service level agreements as possible but still cannot guarantee that every customer will receive a service that totally fits their requirements. In order to deal with these eventualities, the organisation has to develop and implement a customer complaints procedure so that any problems that customers experience can be dealt with quickly and effectively. This can also be applied to the higher education environment and the QAA have recently issued one of their series of codes of practice specifically geared towards dealing with student complaints (QAA, 2000a). Such a procedure can also be used as a further measure of the quality of service by inspection of the number of customer complaints that are registered. If this starts to rise it is an indication that the quality of service may be deteriorating. It therefore follows that a possible measure of the quality of the student experience does emerge; the number of complaints (officially made to the course director or course representatives) per course.

### **Summary of the Proposed Metrics**

It is now possible to summarise the metrics that have emerged from the enquiry stage of the process as possible candidates for performance indicators of the delivery of a quality student experience that conforms to specification. These are not yet the definitive proposals. Their feasibility and practicability have to

be tested with a subset of the interviewees as part of the metrication stage of the process and this is reported below.

The candidates are set out in the following list.

- a) Proportion of tutorial/lecture time taken by the tutor input
- b) Overall attendance rate of the course
- c) The popularity of an option (possibly ratio of applicants to places)
- d) Proportion of standardised material used as part of the course
- e) Student satisfaction rating
- f) Pass rate of students on the course
- g) The speed of the feedback, in terms of assignment turnaround time
- h) Number of personal tutor appointments per student per year
- i) Proportion of personal tutor appointments kept
- j) Number of accesses to the VLE site per student per course presentation
- k) Number of student complaints

A number of these proposed metrics can be seen to answer some of the question posed by Dr. G in his interview at the initial part of the enquiry stage. However, he also suggested a number of areas that did not emerge during the discussions

with the staff or the students and these are described in the following paragraphs.

Does it actually take place? This partly depends on the department having developed an effective timetable for the programme to ensure that all the constituent courses are booked into appropriate accommodation with the correct lecturers. This then has to be effectively publicised to the students through either programme or course guides, notice boards or university intranets. Assuming the timetable is in place, the members of staff are available and adequate publication of the timetable has taken place then all parties can be expected to make themselves present at the appropriate time in the appropriate place. In the interviews, P felt that present day students who have had to pay directly for tuition are far more conscious of getting value for money than previous generations of students and consequently look less favourably on lectures that are cancelled, for whatever reason. The natural expectation would be for all timetabled sessions to take place and so a possible metric to cover this area could be: The proportion of timetabled course sessions that took place.

Did it start on time? This is also an area where more customer-oriented students could have cause for complaint. If a session is timetabled to start at 10 o'clock, then it is reasonable for a paying customer to expect it to start on time. However this is one area where the notion of the student as a customer runs into conflict. A course session is an interactive process with the "customers" forming part of the service package (Voss, 1985, pp. 51-55). Consequently, it is incumbent on them to arrive on time. Because of the disruptive influence of students entering a session once it is underway, lecturers are often tempted to delay the start until most of the students are at their desks. Unfortunately this leads to students assuming that the lecture will not start on time and therefore making even less effort to be there for the start. A "vicious circle" develops. These difficulties should not, however prevent the suggestion of a metric in this area. Although it would be difficult to guarantee each session starting exactly on time, they should start within a reasonable window of the published start

time. To accommodate this, a possible metric could be: The proportion of sessions that started within x minutes of the published time. Given that students often have to attend sessions for other courses after the finish of a particular session, it is important that sessions finish on time. A late finish can also be an indication of bad planning on the part of the lecturer. This would suggest a complementary metric: The proportion of sessions that finished within y minutes of the published time.

Was the accommodation appropriate? It can sometimes be difficult to timetable suitable accommodation especially in volatile recruitment environment. In certain subject areas, such as computing or business studies, there can be quite different recruiting patterns from year to year. This is a problem especially for those institutions that undertake a large part of their recruitment through the clearing system. The timetables and room allocations have to be made before the exact outcome of recruitment is known. This can lead to over crowded classes and the need for accommodation for additional tutorial classes in the case of over recruitment, or of over-large lecture halls in the case of under-recruitment. These issues are even more pertinent to science and engineering programmes that require appropriate laboratory accommodation as well as classroom accommodation. Despite these difficulties, it is important that courses are timetabled into suitably sized classrooms or laboratories.

As well as the size of the accommodation being appropriate, the general quality of the accommodation provided is an important factor. This can be assessed in terms of the facilities provided, the cleanliness of the room, the heating and lighting and so on. For all of these features, a binary measure (was the room clean? Was the room big enough?) is probably more appropriate than trying to construct a sliding scale. Furthermore, it is not very practical to have a large number of such measures that have to be assigned and when one adds this to the fact that a failure in any one of these would adversely affect the quality of the environment, perhaps a single binary measure would be appropriate. The



suggestion is therefore: a binary measure or a survey on the quality of the accommodation.

Were the facilities adequate? This area is closely related to the previous one. Even if there are facilities provided, such as an overhead projector, a video/computer projector, whiteboard and markers, window blinds and so on, this is no guarantee that they will be effective or operational. A lecturer who arrives for a course session armed with a laptop computer containing a PowerPoint presentation, only to find that the projector is not working, often has to waste time trying to get it repaired, or has to cancel the class or has to ad-lib. None of these alternatives can be regarded as satisfactory. The suitable metric for this aspect of quality assessment can be argued in a similar way to the previous metric: a binary measure or a survey on the quality of the facilities.

For completeness, these will be added to the list of candidates to be explored with the sample in the metrication stage. They are articulated as follows.

- l) The proportion of timetabled course sessions that took place
- m) The proportion of sessions that started within x minutes of the published time
- n) The proportion of sessions that finished within y minutes of the published time
- o) A binary measure or a survey on the quality of the accommodation
- p) A binary measure or a survey on the quality of the facilities (audio visual equipment, flip charts etc.)

## **CHAPTER 6: METRICATION STAGE**

A series of short, follow-up interviews were set up with a sub-set of the original interviewees in order to test the viability of the metrics proposed above. The interviewees were not randomly selected from the original group. They were chosen because they were the interviewees who had shown a broad understanding of performance indicators and they had indicated the possibility of emergent metrics during their interviews. These participants were J, K, L, M and P. During the follow-up interviews, each of the metrics suggested in Chapter 5 were proposed and the interviewee was asked for his or her comments and, if a particular metric was supported, what the benchmark or target value should be. The results of these interviews are summarised in the following paragraphs.

### **Proportion of Tutorial Time Taken by Tutor Input**

There was general support for the notion of a measure of the proportion of tutorial time taken by tutor input as opposed to student input. The difficulties in being able to make such a measurement were discussed and noted. The only practical way of undertaking the measurement would be by an independent observer in the tutorial. However, all the interviewees noted that classroom observation is a feature of some quality assessment systems, and agreed that the use of this metric could be seen as removing some of the subjectivity from the exercise. Setting a target or benchmark was also non trivial. Would the ideal be 50:50 or should it be tutor 60%: students 40%? Or should it be tutor 40%: students 60%? More research would be needed in this area on the specific nature of the targets and it may be the case that the indicator was tested to try to derive optimum values through comparison with other quality measures.

## **Overall Attendance Rate of the Course**

There was some limited support for the use of attendance as a measure of quality as the interviewees felt that students do tend to “vote with their feet” if they are dissatisfied with particular classes. One of the difficulties with using attendance rates as a measure is that they can be affected by circumstances beyond the control of the lecturer, including the particular timetabled slot that the session is allocated. All of the interviewees relayed examples of where they had had poorly attended classes which had been the result of a coincident coursework deadline for a different course. To be “penalised” in these circumstances would be unjust. The discussions about the target or benchmark for this form of metric were mainly about the need for it to be associated with the cohort average for the other courses rather than an absolute figure. It is also possible that attendance rates are influenced by the characteristics of a particular institution’s student population. In the opinion of one of the interviewees, the greater the diversity, particularly in terms of the maturity of the students and possibly, if there is greater representation from the lower socio-economic groups, then the attendance rates may be lower due to the increased family or outside work commitments. As a consequence, any target attendance rate would have to be developed by an institution taking these characteristics into account. Given the diversity within higher education, a “national” target attendance rate is difficult to accept without some form of moderating or normalising mechanism.

## **The Popularity of an Option**

Similar difficulties were expressed over the use of the popularity of an option as a quality measure. Students could opt for a particular course because of its content, in spite of the lecturer assigned to it. The interviewees did comment, unprompted, on the fact that the lecturer assigned may have a reputation for being non-taxing in terms of the material delivered or for being a lenient marker. It was felt that if this measure were to be used it would need to be

carefully moderated and used alongside other measures such as pass-rates for the course. However, the general view of the interviewees was that it would be too difficult to isolate all the complicating factors in order to develop a meaningful indicator in this area.

### **The Proportion of Standardised Material Used as Part of the Course**

A performance measure associated with the amount of standardised material that was used as part of the course received no support whatsoever from the interviewees. There were views expressed that standardised material is not always of the highest quality and so its use would not automatically indicate a quality improvement. There was a view that the effective lecturer had to pitch the material at the particular group being taught and that this was not always possible when using standardised material. However, the notion did provoke interesting discussion because of the common notion of increased quality through standardised components in other “industries”. This is an area that does not seem to have been widely examined within higher education research and would probably make an interesting piece of separate research. However, for the purposes of this study, the use of it as a performance indicator received little support.

### **Student Satisfaction Rating**

Student satisfaction ratings at either course or programme level were supported by the interviewees subject to the usual provisos about the need for care in the formulation of the questions to be asked. Institutional or department targets could be set and individual course or lecturer ratings could be measured against these targets. Such a measure would also be useful in trying to determine continued improvement; rather than it being used as a point indicator, the trend of the measure from year to year could be used to determine quality improvement or deterioration. The issue of standardisation at either an institutional level or a national level was discussed. There was interest shown in

the national student survey but fears were expressed on how it would be used. It may not be appropriate for it to be used to compare directly one institution with another, without the possibility of benchmarking to take account of the diversity of the higher education environment.

### **Pass Rates of Students on the Course**

Pass rates as a measure of quality received mixed responses from the interviewees. Certainly, if assessments have been properly constructed to test the learning outcomes for a course, and if the students on the course all have the correct pre-requisite qualifications and if they have participated actively in the learning and teaching, then most should pass. A high failure rate could therefore indicate that the delivery of the material and its subsequent assessment has been inadequate. However, some interviewees mentioned the issue of acknowledged difficult topics in certain programmes and that these do regularly have higher failure rates than other courses. These interviewees were not dissuaded by the arguments that some lecturers appear to be able to cope with “stumbling block” courses, commenting that it was possible to achieve apparently good results by lowering the assessment standards. If such a measure were to be used, it would need to tie into the institutional progression rate statistics. There have been such indicators proposed by the HEFCE (HEFCE, 1999b) together with a way of benchmarking them to try to account for the diversity of the higher education environment. Any pass-rate indicators would probably have to be set against these standards.

### **Speed of Feedback of Assignments**

The proposal for the speed of feedback being used as a performance measure was supported by all the interviewees, although the measure would need to be an institutional or departmental standard that took local circumstances into account. In many institutions, there would be a standard that all coursework would be returned, marked, to students within a certain period, say two weeks,

of the hand-in date. All courses would be expected to operate to that agreed standard in terms of the feedback given to students. If this approach were to be adopted there would need to be an amendment to the suggested metric. Instead of a measure of the average time taken to return marked coursework to the students, it may be better to use the percentage of coursework handed back within the institutional deadline.

### **The Number of Personal Tutor Appointments per Student per Year**

There were concerns expressed with both the number of personal tutor appointments and the proportion of those kept. All the interviewees referred to the fact that different students have different demands on a personal tutoring system and some students do not encounter the problems that require the attention of a personal tutor. They pointed out that the difficulty seems to be in the interpretation of the role of the tutor and, in particular the difference between academic personal tutoring and pastoral support. They felt that it was difficult to arrive at a consensus on the constituents of each of these within an institution without trying to get agreement across the sector. The general feeling of the group was that if individual academic tutorials are a part of the course then they should take place and there should be an institutional or departmental standard saying how many should take place and at what time should be allocated to them. A facility for students to receive pastoral support should be available but it is difficult to see how metrics on the number or proportion of appointments made or kept could be a useful measure of the quality of such a service.

### **The Proportion of Personal Tutor Appointments Kept**

It was also pointed out by one of the interviewees that, as a result of widening participation in higher education, it is no longer safe to assume that all students have the same level of general and study skills to supplement their subject

specific knowledge. As a result, an increasing number of programmes have courses built into the first (and sometimes second) year that are geared to developing these skills among the students. Very often, such courses build in personal tutor appointments as part of the programme or the assessment and all the members of the teaching team for these courses act as personal tutors. In cases such as this, there is little need for a separate performance indicator in this area. Consequently, there was limited support for this proposed metric.

### **The Number of VLE Accesses**

It was agreed that the number of visits to a web site is generally regarded as an indicator of the quality of that site. In a similar way it could be argued, in the opinion of the majority of the interviewees, that the number of visits could be a raw indicator of quality for a Virtual Learning Environment site. However, the use of Virtual Learning Environments as a tool in teaching and learning is still relatively new and further research would be needed to develop meaningful quality metrics or performance indicators.

### **The Number of Student Complaints**

The interviewees felt that the number of student complaints about a course or a lecturer was considered to be a valid indicator of a (lack of) quality. The benchmark should probably be zero; a good course or lecturer should not receive any student complaints. However, it was suggested that a little more work is done on this proposal in trying to categorise and identify valid complaints. All the interviewees cited instances where they had been subject to student complaints that they felt were unjustified. These mainly centred on students who were not happy with a particular mark given in an assessment and had used that as a basis for what turned out to be a groundless complaint.

## **The “Hygiene Factors”**

The proposed indicators, l to p specified in Chapter 5, were also discussed with the interviewees. The general view was that they had some merit but again they were seen as part of a definition of a department or institutional standard that formed part of a form of an agreement or contract between the institution and the students. None of the interviewees gave much support for these as measures of the quality of the student learning experience.

In a sense these proposed metrics could be thought of as “Hygiene factors”. This is a term borrowed from the area of organisational behaviour and stems from the work of Herzberg ( Herzberg, 1996). This work proposed that when looking at human satisfaction and hence motivation, there are factors that cause satisfaction and those that cause dissatisfaction but that they are not the opposite of each other. There are certain factors which, when absent or wrong cause dissatisfaction but, if these factors are put right, they do not necessarily lead to satisfaction. These are the hygiene factors and are different from those factors that, when present, lead to satisfaction. As Herzberg expressed it, “The hygiene factors...partake of the quality of briefly acting analgesics...the individual becomes unhappy without them but is relieved only temporarily with them for their effects soon wear off and the hygiene seeker is left...dissatisfied” (Herzberg, 1996, p. 81) The theory can be adapted to the higher education environment.

The argument would be that, for certain of the factors discussed above, their absence would lead to dissatisfaction and hence a feeling of lack of quality of the service in the eyes of the student. For example, if the window blinds in the lecture room do not function properly, then the ability to see the overhead projector will be impaired. This would make it difficult for the students to read what is on the slides and they would feel that the quality of the learning experience was below standard. However, if the window blinds were in first



class condition and excluded all sunlight making the projected image crystal clear, then that, in itself, would not make the students particularly satisfied. Such satisfaction would result from other aspects such as the content and delivery of the course material.

A number of the factors discussed above could be proposed as falling into the category of hygiene factors. These would be the majority of those arising from the initial interview with Dr. G, and are as follows.

The proportion of timetabled course sessions that took place

The proportion of sessions that started within x minutes of the published time

The proportion of sessions that finished within y minutes of the published time

A binary measure or a survey on the quality of the accommodation

A binary measure or a survey on the quality of the facilities (audio visual equipment, flip charts etc.)

There is one of the other suggested metrics that could fall into this category and this is the speed of the feedback, in terms of assignment turnaround time.

In other words, if these standards are met then the institution is delivering its part of the contract with the students. Rather than proposing these as part of a set of performance indicators to be used to measure the quality of higher education, it might be better to use these areas as the basis for recommending service level agreements. Service level agreements are the specification of a service or aspect of a service to be delivered by an individual or a unit to a specified recipient. The agreement defines as precisely as possible the nature of

the service and any parameters such as timing, quantity or rate that can be realistically applied to the service.

Taking the service features listed above, they would, under this proposal, become part of a variety of service level agreements between different members of, or groups in, the university, and the students. For example the proportion of timetabled course sessions that took place, the proportion of sessions that started within x minutes of the published time and the proportion of sessions that finished within y minutes of the published time would all form part of a service level agreement between the teaching team and the students on the programme, in the department, or in the university, depending on how general the agreement was to be.

The binary measure or survey result on the quality of the accommodation would form part of a service level agreement. This would be between the institution building services department or equivalent and either the students as indirect users of the service or the academic department as the direct user. The distinction is that the students are “buying” a service package from the university and the teaching part of that package (which includes the hygiene factors) is delivered by the academic department. Using this interpretation, the building services department provides its service (a suitable room) to the academic department. Similarly, a binary measure or a survey on the quality of the facilities (audio visual equipment, flip charts etc.) could form part of a service level agreement between the media services department (or equivalent) and the academic department.

### **The Final List of Performance Indicators Emerging from the Research**

Following the interviews to test the indicators that emerged from the research, the following indicators received the most support.

- (i) Proportion of tutorial/lecture time taken by the tutor input. Possible target value between 40:60 and 60:40 staff: student input.
- (ii) Overall attendance rate of the course. Possible target value determined by institutional norms relating to the student profile. However 80 - 90% was suggested for full-time courses.
- (iii) Student satisfaction rating. The target for this would depend on the nature of the survey and the scale used. It was suggested that this might be of most value as a trend indicator rather than a point indicator.
- (iv) Pass rate of students on the course. Possible targets may depend on the overall retention rates for the institution, which in turn, would be influenced by the student population. Benchmarks for retention, adjusted for student profile are being developed and the pass rate target should be at least as high as the overall progression rate for that subject area.
- (v) Percentage of coursework handed back within the institutional deadline. There was general support for the target being of the form of x% of all courseworks returned within y working days, where y is the institutional service level norm.
- (vi) Number of accesses to the VLE site per student per course presentation. The target value would be determined by the size of the cohort and the nature of the subject.

- (vii) Number of student complaints. Ultimately an institution or department should aim for zero complaints although this would probably be unrealistic in the first instance. Again, a trend indicator may be of greater use than a point indicator.

## CHAPTER 7: CONCLUSIONS

### The Research Findings

The research has contributed to the knowledge of higher education in terms of both theory and practice. The contribution to theory arises in the following ways.

- (i) The research succeeded in meeting its main objective. This was the development of a set of performance indicators that could be used as part of a process of academic assessment, audit or review to help measure the quality of the student experience of learning and teaching.
- (ii) It used a new methodology that had not previously been applied to quality of teaching and learning.
- (iii) The research has also produced significant findings in two related areas: the adaptation of quality assurance processes from other industries into higher education, and in the flexibility of the use of the holon methodology.

The contribution to practice arises from the following.

- (iv) The knowledge that the indicators produced from the research will be adopted and tested as part of a new system of quality assurance that is to be introduced into a Faculty at London South Bank University. An action plan for this is set out below.
- (v) The fact that it has added to the portfolio of applications of the holon methodology and encouraged the Systems Dynamics group at London South Bank University to seek further application domains for the methodology.

- (vi) The potential to inform further the debate in higher education on the quality of the student experience by providing examples of specifically targeted performance indicators.

The research also identified a number of other issues for further research and practical application and these findings are discussed in greater detail in the following sections. The first sections deal with the performance indicators and their future development in practice.

### **The Performance Indicators**

The performance indicators were developed using a new methodology, the holon methodology, which had not previously been used for this problem domain and the project has demonstrated greater flexibility of the methodology than its originators had been aware of. It became clear during the enquiry stage test that the material that could be explored was rich and plentiful; in fact it could be argued that it was too plentiful given the constraints of the study. The experience of that test led to a significant decision on the scope of the project. That decision was to restrict the enquiry stage and the subsequent attempt at metrication to the area covered by holon 1: the actual experience of the student in the real (or virtual) lecture, tutorial, seminar or laboratory session.

The resulting set of indicators is that specified at the end of Chapter 6, and is as follows.

The proportion of tutorial/lecture time taken by the tutor input.

The overall attendance rate of the course.

Student satisfaction rating.

Pass rate of students on the course.

The percentage of coursework handed back within the institutional deadline.

Number of accesses to the VLE site per course presentation.

Number of student complaints.

### *The Domain of the Performance Indicators*

Most of the discussion in the literature of performance indicators in higher education has been largely restricted to measuring the effectiveness or efficiency of institutional management. For example, staff-student ratios, liquidity ratios and so on are all measures of various aspects of running the institution rather than directly of the quality of the student experience. The indicators developed during this project, however, are set firmly in the domain of the assessment of the quality of the student experience in the classroom. This filled the gap in the application of performance indicators identified in the review of the literature.

### *The Acceptability of the Performance Indicators*

The issue of the acceptability of performance indicators in higher education has been controversial (as discussed in Chapter 2) and there have been a number of occasions, indicated in the literature, where performance indicators have been proposed but not widely adopted.

My analysis of the literature found that many authors express doubts as to whether performance indicators have a legitimate role in quality assessment of the learning and teaching experience of students. In a small number of instances, there have been attempts to forge links between performance indicators and their possible use in teaching quality assessment, but other commentators suggest that performance indicators are simply not applicable. In many instances, the discussion of performance indicators concentrates on the

assessment of the efficiency and effectiveness of the operation of the institution. If they are to be applied, there is an understanding of the need for all parties using performance indicators to understand fully their purpose and context and the need for consultation and ownership of any metrics system.

I found that the higher education environment appears to differ significantly from other industries and sectors on these issues because links between performance indicators and “product” or “service” quality are often a significant feature of those other industries and sectors. It may be the case that higher education is so specialised that forging such links is more difficult or that the appropriate tools have not been available. It is therefore unlikely that proposals to adopt the indicators developed as part of this research, no matter how well argued the development methodology, would be readily welcomed by the academic community without further evidence that they are feasible in application and effective in their use. For this reason, the research undertaken through this project will be used in a further project to test these indicators in my own institution and an action plan for this is presented below. This is the justification of the claim that the research contributes to practice.

### *The Nature of the Performance Indicators*

Throughout the research there was a somewhat “lukewarm” view of the whole subject of performance indicators held by the majority of the interviewees, who are all from an academic background. The enthusiasm of the interviewees for their involvement in the research seemed to emerge mainly from their desire to discuss the wider issue of the quality of the student experience in the classroom rather than the prospect of a useful set of performance indicators emerging from the research. As the performance indicators emerged, I discussed them with colleagues in my own and other institutions and the general conclusion has been that they are worth trying and that they would probably help remove some of the subjectivity from the academic review process. Unfortunately, there was a feeling that the indicators were not very exciting in their own right and seemed to be rather “mundane”. I must admit to the fact that when I started the project, I did hope for some indicators that could be regarded as “exciting” or



“revolutionary”. Any disappointment, however, must be tempered. Performance indicators, by their very nature, are supposed to be easy to use, non-controversial and therefore generally acceptable. The indicators developed could fit this category, with the possible exception of the proportion of tutorial/lecture time taken by the tutor input. Consequently, from this viewpoint the research project can also be viewed as a success.

### *Management of Performance Indicator-Based Systems*

Most of the literature review undertaken as part of this project, and its overall aim, was focussed on the assessment of the quality of the student experience. However, implicit in all “quality movements” inside and outside higher education is the desire to improve quality. Other industries are, perhaps, more overt in this aim with declared continuous improvement procedures (Hill, 1991 pp. 352-356) but continuous improvement has been acknowledged as a worthwhile result of the activities of QAA, HEQC and HEFCE in the educational literature and by the interviewees.

The majority of the discussion on performance indicators in the literature, together with the current HEFCE attempts to develop common data sets, focus on being able to compare institutions along various dimensions, even if some moderation or normalisation is required. The main incentive for them to be used within an institution would be to identify any weaknesses with a view to implementing changes in order to improve the performance indicator. This has been addressed in the non-higher education areas and an important distinction is made. Managers do not have direct control over the performance indicators; they control processes that produce results that are measured by the indicators.

Sherwood talks about this issue in terms of the managers having the ability to operate the “levers” of the institution in order to aim for a particular target. The performance indicator signifies how close to that target the manager is but it does not help them control the lever (Sherwood, 2002). Hayashi notes the difficulties in finding the message from within large amounts of data and suggests that managers continually rely on a process of intuition to solve

complex problems when logical (that is number based) methods fail (Hayashi, 2001, pp 59-62). Other commentators put forward the view that decision-making is not an event (where direct measures can be employed), but a process that takes place over time and is therefore subject to other forces beyond the control of the manager (Haspeslagh et. al., 2001, pp64-68). These views point to the limitations of performance indicators as a management tool.

There are parallels to be drawn with higher education. A widely accepted interpretation, borne out by the literature and the interviews is that teaching and learning are processes. The fact that they operate in socio-technical environments results in some similarities with management processes.

Teachers, like managers, lead, plan, monitor, control and undertake many of the functions required of managers. Consequently, the performance indicators developed by this research and any similar exercises are likely to have the same limitations as those used in other environments. As a consequence, they would have to carry similar “health warnings”.

This recognition of the limitations of performance indicators may, in fact, be beneficial when trying to introduce them into my own or any institution and leads me to consider their function. As noted in the literature, performance indicators and other metrics are still alien to many in higher education. Previous attempts to introduce measures (including the QAA methodology based on “scores out of 24”) have been met with resistance. The responses in my study indicate that if performance indicators could be introduced as a kind of *formative* assessment as suggested by Murray (Murray, 1984, pp. 123-127) as opposed to *summative* assessment, that introduction may stand a greater chance of success. Where they may be of the greatest use would be to provide feedback to the tutor (or the institution) on the result of a certain practice in terms of the quality of the student experience. This, together with the tutor’s own intuition and experience may enable them to try different levers (using Sherwood’s analogy) in order to improve that experience. Using this approach may make the notion of measures and performance indicators more palatable to the higher education community and hence make them more likely to be embraced.

### *An Action Plan*

The Action plan for the introduction, calibration and testing of the indicators in my own institution is described below. An important part of the analysis following the testing of the indicators will be to determine whether the performance indicators, developed from the research, when calibrated, tested and implemented, are likely to lead to improvements in the quality of the student experience. Although this is a long-term exercise, there will be an opportunity to get immediate feedback from Heads of Department and programme leaders on whether the indicators help in indicating where any problems might lie so that the appropriate “levers” can be operated. If the results of discussions with these managers are generally positive, the indicators will be presented to the university senior management team, along with a comprehensive report on the experience of the faculty. The report will recommend implementing the performance indicators in other faculties.

The performance indicators developed by the research will be implemented as part of the systems for the management and enhancement of teaching quality in the Faculty of Business, Computing and Information Management at London South Bank University. Following this, the intention is that the experiment will be extended to cover other parts of the university. The university has undergone a significant change in the senior management over the past three years. There has been a consequent major restructuring of the university from which has emerged four faculties each with a departmental structure. One of these faculties is Business, Computing and Information Management (BCIM), which was formed by merging the former Schools of Business and Computing.

Under the previous management, the university had performed badly in the QAA system of subject review and this resulted in poor scores, which translated into lowly positions in most of the league tables. This, together with the new university focus on the quality of the student experience, has resulted in an environment where attempts to develop systems and processes that may result in significant improvements in the quality of learning and teaching are taken

very seriously. The faculty of BCIM, with its mix of business and computing academics with a range of philosophies of management ranging from “hard” to “soft” systems approaches, would form a feasible test bed for the new performance indicators.

The plan for the introduction of the proposed performance indicators to the faculty will be staged as follows.

Stage 1. The indicators are to be introduced at the start of a semester, with a view to the test running for a complete academic year. A small project group has been set up to manage the introduction of the indicators into the faculty. An introduction to the rationale for the introduction of the performance indicators, together with a description on how they were developed will be given to the faculty management by myself, as Dean, in order to secure the appropriate level of “buy-in”, especially from the Heads of Department. This will be followed by similar presentations to all staff. These presentations are to take place in the semester prior to the launch of the scheme.

Stage 2. In parallel with the presentations, some experiments will be undertaken by the implementation team in order to ascertain the practical difficulties in taking the measurements and, subsequently, the development of proposed target or benchmark values. The suggestion for possibly the most controversial of the indicators (the proportion of tutor input) is that it be incorporated as part of the current scheme for peer observation of teaching. This calibration exercise will result in benchmark values and guidance on measurement technique. In some cases, such as with pass rates or student satisfaction rating, there are mechanisms already in existence, whereas others, such as coursework hand-back, require new measuring systems.

Stage 3. A programme of faculty staff development will be undertaken in order to ensure staff are aware of the rationale, the details of the measurement systems and how the information will be used. This will be through the introduction of the subject at one of the faculty “away-days” followed by more

detailed discussions and explanations through departmental meetings. A “PI champion” will be nominated within each department to act as the local expert.

Stage 4. After a complete cycle of one year, the system will be subject to a comprehensive review by the project team in consultation with all the staff involved.

Stage 5. Following the review, a decision will be taken on whether to recommend the extension of the scheme to other faculties within the university.

There are generally very positive attitudes within the faculty for improvement, particularly since it achieved Investors in People status after having been in existence for only fifteen months. Despite this, however, it is likely that the proposal to introduce the scheme will meet with some opposition. The overall lack of enthusiasm for performance indicators detected through the literature review and in some of the interviews is likely to be reflected in the feelings of the faculty staff. These feelings will need to be acknowledged and staff reassured that the purpose of the introduction of the scheme is developmental and not punitive.

As part of this process, the faculty and departmental meetings will emphasise some of the issues brought out as part of the research, such as the fact that previous applications of performance indicators were focussed on institutional management (and could therefore be seen as punitive) but that those proposed were derived through a focus on the student experience. The development meetings will also point out the inconsistencies in the current QAA review methods due to their subjectivity and that the use of these indicators is intended to overcome that inconsistency. The goal is overall continuous improvement of the student experience which will, in the long run, result in an improved environment for staff due to an enhanced reputation for the university. This message of “jam tomorrow” is always a difficult one to impart, but it is possibly a somewhat easier proposition in a faculty such as BCIM where such issues are routinely dealt with as part of the curriculum.

Because the holon methodology uses the views of practitioners elicited through a series of interviews to produce the performance indicators, it is possible that there would be greater support for their adoption. Some of the staff members involved in the project will be part of the faculty where the indicators are to be introduced as part of new procedures for quality maintenance and enhancement. It is hoped that a sense of shared ownership will develop that will ease the implementation of the indicators, their calibration and their testing.

### **Fitness for Purpose and Conformance to Specification**

The research also led to another significant finding as a result of investigating how quality assurance processes in other industries could be adapted for use in higher education. This finding was the apparent confusion over the use of the terms “fitness-for-purpose” and “conformance-to-specification”. There was a significant amount in the source material from manufacturing and service sectors on fitness for purpose and conformance to specification. However, a balance had to be struck to enable a reasonable comparison between the higher education sector, where the use of these terms is less prevalent, and the vocabulary of quality systems in operation in other industries.

The notion of performance indicators and quality measurement is much better established in both manufacturing and general service industries than in education. From the 1970s onward, largely inspired by the success of Japanese manufacturing methods, the issue of quality measurement, monitoring, control and improvement and of the use of performance indicators has been taken very seriously in a large number of sectors (Hill, 1991, pp 353-356 and pp. 379-383). A number of clear and concise descriptions of the notions of measuring fitness-for-purpose, conformance-to-specification and related quality issues were found in the non-higher education literature (Hill, 1991, p. 369; Hughes and Cotterell, 1999; Voss et al, 1985). The term “fitness for purpose” did occur in the higher education literature, with definitions and descriptions that went some way towards alignment with those used in manufacturing or other service industries (Clark, 1997, p.223; Harvey and Knight, 1996 pp. 5-7; Brown, 2004). Despite this, however, there was some evidence of confusion over the use of “fitness

for purpose” (Brown, 2004, pp. 86-88) and it could be argued that some of the comments assigned to fitness for purpose would probably be more accurately described as conformance to specification (Harvey, 1994, p6, Brown, 2004, p. 329).

Using the non-higher education sectors as a guide, I decided to use fitness-for-purpose and conformance-to-specification as the two main pillars of my analysis of the quality of the student experience. The mechanics of this was through the development of the framing and other sub-holons, which are illustrated in Figures 4.1 and 5.1 and described in Chapter 4. It was this exercise that indicated that certainly my interviewees and, some of the sources cited in the literature review had confused these two ideas, and in some cases, got them the wrong way round. The interviewees frequently referred to the adherence of programmes to the QAA benchmark statements, the framework for higher education qualifications and professional body requirements as being “conformance-to-specification”. Using the holon methodology to develop the framing holon, “quality of teaching” and the main sub-holons “conformance-to-specification” and “fitness-for-purpose”, I concluded that it was the latter that should be concerned with following benchmark and other statements and the former was the concern of whether the delivery of the course or programme conformed to what the university specified in its prospectus, its programme specifications and its course guides.

The confusion (Brown, 2004, pp. 86-88) could be thought of as understandable because of the difficulty often found in transporting concepts from one environment to another and because of some of the terminology used by the QAA and others. The notion of fitness-for-purpose was developed from the vocabulary of manufacturing industry and it is relatively easy to see how it is applied to a manufactured artefact. Basically it relates to the questions “Does it (the artefact) work?” or “Does it do the job that it is supposed to?”

Conformance to specification refers to whether the artefact performs in the way that the manufacturer says that it will. For example a car may be fit for purpose in that it gets the driver from A to B but the specification for a Rolls Royce will

be very different from that of a Smart. Transferring these ideas into a service industry is difficult enough but it is even more so in the very specialised service industry of higher education. What adds to the difficulty is the choice of words used in higher education. The fact that the descriptors of the recommended contents of degree courses in various subject areas are known as “benchmark specifications” immediately leads to an association with the word “conformance”.

As discussed in Chapter 4, this distinction is important. Quality assurance, maintenance and enhancement have become permanent and growing features of higher education and any best practice from other industries would be worthy of consideration. However, if such good practice is to be imported, then it is vital that it is adapted in the correct way; otherwise any tools used may be applied in incorrect ways leading to the production of incorrect results.

### **Use of the Holon Methodology**

A further significant finding from the research concerned the methodology itself. There was the opportunity for innovation in this research project through the application of a new methodology, which was developed from experience in an entirely different field, to a problem visited repeatedly in the educational research literature. The holon methodology was originally developed as an aid to software development process improvement. Its use has been adapted by the London South Bank University team to the problem domain of planning and costing processes. The methodology is a combination of the Goal-Question-Metric technique and soft systems methodology, with the latter having been specifically developed to tackle human activity systems, albeit from an information systems analysis perspective (Checkland, 1981, pp 68-70).

This research has taken the holon methodology further to adapt it to the assessment of quality in higher education. Its use in the area of quality assessment was novel and the originators were uncertain that it was flexible enough to cope with such a less well-defined area. However, the study of the quality of the student experience in higher education is an excellent example of



a human activity system and, as a consequence, the methodology could almost have been bespoke for the research problem.

It was a relatively straightforward exercise to follow through the various stages of framing, enquiry and metrication. The action stage of the methodology concerns the implementation of the performance indicators that have been derived as part of a revised quality assessment system within the institution. Although that implementation will be undertaken, its reporting is beyond the scope of this research project. As was indicated in Chapter 3, the decomposition of the process into stages and the use of the holon tools to guide the interviews was an extremely successful enterprise and led to some interesting proposals for performance indicators.

However, I have come to the conclusion that, in one sense, the methodology actually constrained the research. The problem lies in the fact that it was both fit-for-purpose and it conformed-to-specification. The methodology guides the research towards the discussion and analysis of issues that can lead towards metrics or performance indicators; that is what it is designed to do. It tends to restrict exploration of whether performance indicators are a “good thing” for the area because it starts out with the aim of developing them. More importantly, it tends to restrict the discussion of interesting topics that emerge if they do not obviously lead towards numbers and measures. Some of those topics are discussed, briefly, below.

These conclusions on the suitability and limitations of the methodology have been fed back to the systems dynamics group and they intend to use them in the further development of the methodology, which is to be extended and applied to a range of other problem domains.

### **Other Discussion Points Emerging from the Research**

I have no doubt that the application of the holon methodology was successful in meeting the aims of the research. However, as discussed above, it is “fit-for-purpose” and, ironically, some interesting aspects of the research arise in those

areas that time and the methodology restricted me from exploring in full. These are indicated in the following paragraphs.

### *Student Satisfaction Surveys.*

One of the proposals for a performance indicator that emerged from the research was a student satisfaction rating at either a course or a programme level. There has been a resurgence of interest in student surveys following the initial work by Brannigan, Mazelan and colleagues (Brannigan et.al, 1992; Mazelan et.al., 1992), and this has resulted in recent proposals and pilots for a national student survey (HEFCE, 2002).

A significant amount of material was found in the literature on the topic of student surveys as a method of determining a view on the quality of the student experience. Authors discussed surveys both at institution level to measure general student satisfaction (Harvey et al, 1997) and at programme or course level to measure the quality of the experience of learning and teaching (Ramsden, 1991). There was commentary on the potential benefits for students in the form of possible subsequent quality improvements (King et al, 1999; Murray, 1984, Ramsden, 1991) and even as a potential performance indicator (Cave et al, 1997, p. 147). However, other commentators expressed reservations about the use of student surveys in this way (Ramsden, 1991) particularly if they are proposed as a means of comparison between institutions (CVCP, 1995). There is also some evidence of some unwillingness to accept student surveys as a valid tool in quality assurance by sections of the academic community (Cave, 1997, King, 1999 p. 98). There have been doubts expressed over their validity and value due to the presence of factors that may confound the quality experience (Ramsden, 1991, p. 147), due to them having too narrow a focus (Harvey and Knight, 1996, p. 80) or because of the adverse effects they may have on academic staff (Murray, 1984, pp. 123-127).

During the interviews and subsequent discussions of the research, a view emerged that if it were possible to develop a robust enough student satisfaction survey that contained closed questions that could be codified, then these could

be aggregated and analysed to produce satisfaction metrics or ratings. As noted above, this is undertaken in the form of end-of-course or end-of-programme questionnaires in a number of institutions and some of the questions relate to aspects of teaching quality.

It would have been interesting to explore further the issues surrounding this form of measure of the quality of the student experience as part of the research. In particular, some of the interviewees raised the issue of whether students believed the anonymity claims on the processing of the questionnaires. If they did not believe those claims, then they may be concerned that any adverse comments or ratings would be seen by their lecturers and that those comments may have an influence on the assessment process. Despite the measures taken to avoid this, such as running the survey after completion of assessments, distribution and collection by third parties, processing by outside agencies, doubts often remain and this leads to subsequent worries about bias.

The reason why the “critics” of surveys, among the interviewees, were comfortable about their use emerging from this project was that they would be one among a number of performance indicators. In this way there may be the opportunity for triangulation of the results, that is, using other indicators to check the results emerging from the survey data.

### *Managing Student Expectations*

Another topic that occurred early in the investigation, as part of the first set of interviews, was the issue of managing student expectations. One of the interviewees commented that students with no previous exposure to university life, through family or friends, might expect it to be like “Morse’s Oxford” referring to the fictional, ex-Oxford scholar detective, in the books by Colin Dexter. If a student’s views of a university were exclusively the notions of grand architecture, panelled rooms and one-to-one tutorials, then their arrival at a typical new university may be somewhat of a shock. There are other less dramatic examples of the problem of managing expectations than this.

Students who enrol on large courses in business studies or Information Technology may find themselves in lecture groups of over one hundred and fifty. Although they will attend much smaller tutorial groups, they may have previously studied at school or college in much smaller groups and may have that expectation of university life. Students may be confronted with a vast array of clubs and societies inviting membership at a “freshers’ fair” and, although this can be exciting and stimulating, it can also be overwhelming. The problem of managing student expectations is about how an institution can help close the gap between the students’ ideas about university life and the reality. It is about induction (both before and during the enrolment process) and about improved communication between the student and the institution. There is a potentially rich seam of research around these issues and the possible longer-term effects that they may have on the quality of the student experience.

#### *Student Participation and Interaction in Lectures and Tutorials*

An interesting potential line of investigation emerged from the interviews with the students and, in particular, the mature students. A unanimous view of the staff interviewees was that the notion of a quality student experience, or at least of high quality delivery of course material, included a high degree of student interaction with the tutor. Indeed, this was the area of one of the performance indicators suggested by the research. The students, however, were less convinced of this. Although most acknowledged that the ability to engage in class discussions and to give presentations of coursework and other materials was an important part of an Honours degree programme, the mature students, who were returning to education after a break, were very critical of the ways in which this was effected. They talked variously about the fear of being “picked on”, of adverse reactions to comments by the tutor or fellow students, of feeling less “articulate” than their fellow students (Chapter 5).

These difficulties were acknowledged by some of the staff interviewees who talked about the need to instil confidence and that differences in cultural backgrounds could lead to students feeling uncomfortable when encouraged to participate (Chapter 5). I found this apparent dilemma a very interesting and

rich prospect in terms of further research. It is especially important with the moves towards increasing access for a more diverse student population. This should mean more students from the lower socio-economic groups, possibly more students returning to higher education after a significant break and more students from outside the European Union. Within all of these groups there are likely to be numbers of students for whom participation in lectures and tutorials through class discussions or presentations would not be a natural process and who may feel uncomfortable at the prospect of having to join in. Consequently, the “dilemma” referred to above is likely to occur on a greater number of occasions.

### *The Reuse of Components*

The issue of the use of standardised components or the reuse of components occurred quite unexpectedly during the staff interviews. The comments are reported in Chapter 5 and they arose “unexpectedly” because the topic had not emerged from the literature review, which covered a wide range of publications on quality in higher education. In the interviews comments were made about the existence of excellent libraries of presentation materials but that many staff were reluctant to use them because they were “not-invented-here”. One of the interviewees reported that these attitudes may be changing and referred to the notion of “re-use” that was a common concept within his discipline.

The use of standardised components as the source of a potential performance indicator stayed with the project until the final set of interviews because it is something that would lend itself to a metric. However, it was unanimously dismissed in the final analysis (Chapter 6) because of, possibly conservative, views that all material had to be adapted to the particular cohort and that it was too difficult to do this for standardised material. During those discussions, however, it was acknowledged that reuse of components and the use of standardised components were commonplace practices in other industries. This was investigated through a further literature search and examples were found in a variety of sources from different areas. Among these were examples of reuse in computing (Culwin, 1998, p.28) and in general production and operations

environments (Brooke, 1990, pp.120-122). Subsequent informal discussions with other colleagues from the higher education environment drew mixed reactions but a view did emerge that it was an area that was probably worthy of further investigation. This could take a variety of forms ranging from questions about which of the distinctive features of higher education (if any) militate against standardised components or reuse through to the attitudes behind the “not-invented-here” position.

### **Summary of the Contribution of this Research**

This Chapter has described the main findings of the research project and discussed a number of other issues emerging from the project. The main objective of this research was the development of a set of performance indicators that could be used as part of a process of academic assessment, audit or review to help measure the quality of the student experience of learning and teaching. It used a new methodology for the development of performance indicators that had not previously been applied to quality of teaching and learning. The research has therefore met its main objective.

It was never the intention for the research to be an investigation of the advantages and disadvantages of performance indicators as a management tool in general or to lead to a discourse on the applicability of performance indicators to the higher education environment. In that sense, it did not set out to justify their use in the sector. Instead, the research started from the premise that performance indicators are a welcome and permanent feature in many manufacturing and service environments and that it may be possible to develop a set that would be feasible for use in measuring some aspects of the quality of higher education.

However, as part of the background to the research, it was appropriate to report the views that are prevalent in the sector on the use of performance indicators, and those views appeared to be overwhelmingly negative. One possible reason for this negativity could be that, to date, there has not been set of performance indicators that are regarded as feasible in terms of implementation and

acceptable in terms of their ability to address agreed aspects of the quality of the student experience. The dissertation suggests a way forward to develop these and therefore overcome some of this negativity. To this end, the indicators will be adopted and tested as part of a new system of quality assurance that is to be introduced into a Faculty at London South Bank University.

In addition to meeting its main objective, the research has also produced significant findings in two related areas: the potential difficulties in the adaptation of quality assurance processes from other industries into higher education, and in the potential for expanding the use of the holon methodology.

This Chapter has also described how the research has made a contribution to the knowledge of higher education in terms of both theory and practice. The contribution to theory concerns the development of performance indicators that can be used in an area of higher education that is different to those that had previously been discussed in the literature. They were developed using a methodology that had not previously been applied to the area of quality assurance and this has added to the knowledge base of the originators of the methodology. The research also contributed to the knowledge of the potential for adapting quality assurance ideas from other industries to higher education and that in doing so, many commentators mis-use the notions of conformity to specification and fitness for purpose.

The research has also made a contribution to practice. The performance indicators that have emerged from the project will be tested as part of a new system of quality assurance that will be introduced in the faculty of Business, Computing and Information Management at London South Bank University. If judged successful, the test will be extended to other faculties in the university. Confirmation of the feasibility, acceptability and effectiveness of the performance indicators will lead to an approach to the QAA to investigate wider promulgation. The research has also contributed to the practice of the Systems Dynamics group at London South Bank University. The conclusions

on the use of the methodology have been fed back to the group and, as a result, the group are looking at other domains in which to apply the methodology.



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## **Appendix A**

### **Broad Topics Used to Guide the Framing Stage Interviews.**

- 1 Experience of Higher Education quality assessment and audit.
  - 1 The Scope of Quality in Higher Education
    - 1.1 Stakeholders
    - 1.2 Fitness for Purpose
    - 1.3 Conformance to Specification
  - 2 The Dimensions of Quality Assessment/Audit
    - 2.1 Academic Subject
    - 2.2 Pedagogy
    - 2.3 Student Support
    - 2.4 Institutional Management
- 3 What Constitutes a “Quality Student Experience”?
- 4 Is the Effectiveness of Quality Assessment dependent on Academic Subject?
- 5 Peer Review
- 6 Can Quality be Measured (i.e. quantitatively)?
- 7 Are there Areas of Quality in Higher Education where Performance indicators are Appropriate
  - 7.1 Internally (to the Institution)?
  - 7.2 Externally?