Defining Quality

Lee Harvey & Diana Green

Defining Quality

LEE HARVEY & DIANA GREEN, *University of Central England, Birmingham*

ABSTRACT   *This paper addresses the nature of the concept of quality in relation to higher education. It analyses ways of thinking about quality, considers their relevance to higher education, explores their interrelationships and examines their philosophical and political underpinnings. The relative nature of quality is examined. First, quality means different things to different people. Second, quality is relative to 'processes' or 'outcomes'. The widely differing conceptualisations of quality are grouped into five discrete but interrelated categories. Quality can be viewed as exception, as perfection, as fitness for purpose, as value for money and as transformative.*

Determining criteria for assessing quality in higher education requires an understanding of different conceptions of quality that inform the preferences of stakeholders.

Introduction

Quality is an important issue in higher education in the United Kingdom. For the participants in the education process it always has been important although frequently taken for granted. Changed circumstances, increased levels of participation, widening access, pressure on human and physical resources, appraisal, audit and assessment have raised the profile of 'quality' within higher education (Sallis, 1990; Hurley, 1992). The quality of higher education has also been a long-standing concern for employers, both as graduate recruiters and as research and training collaborators.

> In relations with business, as in all else, quality matters. There might once have been a time when the traditional character and the modest scale of the activity of HEIs [Higher Education Institutions], and the level of public confidence in their work, enabled quality to be taken-for-granted. Not now. Business will demand high quality services in return for full cost pricing. Competition between HEIs will also intensify as they increasingly target markets and industries, and most institutions will wish to differentiate themselves on the grounds of their excellence in selected areas. (DTI/CIHE, 1989, p. 29)

Quality also matters to the government and its agencies. There has always been a presupposition that British higher education is 'good quality' (Harrison, 1991; Elton, 1992). The White Paper (HM Government, 1991, paras 18 and 26) refers to teaching

and scholarship in higher education as being "held in high regard both at home and internationally" and states that the "quality of research in the United Kingdom has achieved world-wide recognition". Dearing (1991, p. 12) goes further:

> The quality of the educational experience provided by our universities gives them a high world ranking—a source of envy that must be safeguarded and enhanced by a proper concern to foster continued development of teaching of high order, notwithstanding the continuing search for cost effectiveness.

The linking of quality with cost effectiveness has given new urgency to the analysis of quality in higher education. So, for a variety of reasons, quality matters.

The Nature of Quality

Quality is often referred to as a relative concept. There are two senses in which quality is relative. First, quality is relative to the user of the term and the circumstances in which it is invoked. It means different things to different people, indeed the same person may adopt different conceptualisations at different moments. This raises the issue of 'whose quality?' There are a variety of 'stakeholders' in higher education, including students, employers, teaching and non-teaching staff, government and its funding agencies, accreditors, validators, auditors, and assessors (including professional bodies) (Burrows & Harvey, 1992). Each have a different perspective on quality. This is not a different perspective on the same thing but different perspectives on different things with the same label.

Second is the 'benchmark' relativism of quality. In some views, quality is seen in terms of absolutes. There is the uncompromising, self evident, absolute of quality (or 'apodictic' as Husserl (1969) calls it). "As an absolute [quality] is similar in nature to truth and beauty. It is an ideal with which there can be no compromise" (Sallis & Hingley, 1991, p. 3). In other views, quality is judged in terms of absolute thresholds that have to be exceeded to obtain a quality rating (for example, the output has to meet a predetermined national standard). In other conceptualisations, however, there is no threshold by which quality is judged, rather quality is relative to the 'processes' that result in the desired outcomes. If, for example, the product or service consistently meets its maker's claims for it then a product has quality, irrespective of any absolute threshold. Thus, some conceptualisations of quality are rather more 'absolutist' than others.

Much has been written about quality in education, mirroring the outpourings in management and the caring services. Most of this has been about quality control, assurance, management, audit, assessment, policy and funding. Little has been written about the concept itself (Scott, 1987; Goodlad, 1988). For example, despite devoting considerable attention to quality assurance and assessment, The White Paper (HM Government, 1991) has nothing to say about the *nature* of quality. As Ball (1985a) asked more than half a decade ago, "What the hell is quality?"

This paper addresses the nature of the concept of quality in relation to higher education. We will analyse the different ways of thinking about quality, consider their relevance to higher education, explore their interrelationships and examine their philosophical and political underpinnings.

We all have an intuitive understanding of what quality means but it is often hard to articulate. Quality, like 'liberty', 'equality', 'freedom' or 'justice', is a slippery concept.

"Quality is notoriously elusive of prescription, and no easier even to describe and discuss than deliver in practice" (Gibson, 1986). Quality is also a value-laden term: it is subjectively associated with that which is good and worthwhile (Dochy, Segers & Wijnen, 1990; Pfeffer & Coote, 1991). For this reason, linking an activity to quality may serve to validate or justify it irrespective of what the notion of quality might mean.

There are widely differing conceptualisations of quality in use (Schuller, 1991). However, these can be grouped into five discrete but interrelated ways of thinking about quality. Quality can be viewed as *exceptional*, as *perfection* (or consistency), as *fitness for purpose*, as *value for money* and as *transformative*.

Quality as Exceptional

The exceptional notion of quality takes as axiomatic that quality is something special. There are three variations of this. First, the traditional notion of quality as distinctive, second, a view of quality as embodied in excellence (that is, exceeding very high standards) and third, a weaker notion of exceptional quality, as passing a set of required (minimum) standards.

Traditional Notion of Quality

Traditionally, the concept of quality has been associated with the notion of distinctiveness, of something special or 'high class'. A quality product confers status on the owner or users. The traditional notion of quality implies *exclusivity* (Pfeffer & Coote, 1991). This view of quality underpins the elitist view of the high quality of an Oxbridge education. Quality is not determined through an assessment of what is provided but is based on an assumption that the distinctiveness and inaccessibility of an Oxbridge education is of itself 'quality'. This is not quality to be judged against a set of criteria but *the* quality, separate and unattainable for most people.

The traditional notion of quality does not offer benchmarks against which to measure quality. It does not attempt to define quality. It is apodictic—one instinctively knows quality. The traditional view in education is that universities embody quality and thus do not need to demonstrate it (Church, 1988). This was implicit in the penultimate research assessment exercise in Britain, where it was "assumed that the panels would recognise quality when they saw it" (UFC, 1991, p. 5).

The apodictic approach to quality can be detected in German higher education. The system is not exclusive but quality assurance is self-evident. There are no agencies external to the institution or agencies within the institution with an explicit role for quality assurance. Instead, the values of the system are internalised by the academic staff and followed through in everything they do. There has been a lot of confidence within Germany that the current system works well. However, in recent years, a number of changes have taken place which have called into question whether the current system is still providing a quality service. This has led to pressure on the institutions to make their internal implicit systems more public. It has not led, so far, to calls for more external explicit methods of quality assurance (Frackmann, 1991).

The traditional concept of quality is useless when it comes to *assessing* quality in higher education because it provides no definable *means* of determining quality. However, the traditional notion of quality sticks to any usage of the term and has the potential to obscure its meaning (and the political realities) (Pfeffer & Coote, 1991, p. 4).

Excellence 1 (Exceeding High Standards)

Excellence is often used interchangeably with quality (Ball, 1985a). There are two notions of excellence in relation to quality, excellence in relation to standards and excellence as 'zero defects' (which is discussed below on p. 15).

Excellence 1 sees quality in terms of 'high' standards (Reynolds, 1986; Moodie, 1986a). It is similar to the traditional view but eschews the apodictic nature of the traditional notion and identifies what the components of excellence are, while at the same time ensuring that these are almost unattainable. It is elitist in as much as it sees quality as only possibly attainable in limited circumstances. The best is required if excellence is to result. In the education context, if you are lectured by Nobel prizewinners, have a well-equipped laboratory with the most up-to-date scientific apparatus and a well-stocked library, then you may well produce excellent results.

Excellence 1 is about excelling in input, and output. An institution that takes the best students, provides them with the best resources, both human and physical, by its nature excels. Whatever the process (by which students learn) the excellence remains. It does not matter that teaching may be unexceptional—the knowledge is there, it can be assimilated. Oxbridge excels in this sense.

Excellence in this sense is often judged by the reputation of the institution and the level of its resources (Astin, 1990). These usually go hand-in-hand, a high level of resourcing endorses reputation and a good reputation attracts resources.

Excellence 1 can be conceived of as "doing the right things well". In education, at an institutional level, this means recruiting the right graduates and providing the right environment to give opportunities for the individual development of knowledge. It implies that quality output is a function of quality input.

Excellence 1, with its emphasis on the 'level' of input and output, is an absolutist measure of quality. It is not just an elitist notion confined to the 'ivory towers' of a few British universities, it is also for the predominant approach to quality of education in the USA (Astin & Solomon, 1981; Moodie, 1988; Miller, 1990).

The notion of centres of excellence in higher education is welded to this view of exceptional quality (DTI/CIHE, 1989), despite concessions to total quality management (discussed below).

Checking Standards

The final notion of quality as exceptional dilutes the notion of excellence. A 'quality' product in this sense is one that has passed a set of quality checks. Rather than unattainable, the checks are based on attainable criteria that are designed to reject 'defective' items.

'Quality' is thus attributed to all those items that fulfil the *minimum* standards set by the manufacturer or monitoring body. Quality is thus the result of 'scientific quality control', it is conformance to standards.

At any given moment there will be an 'absolute' benchmark against which the product is checked, those that satisfy the operationalised criteria will pass the quality threshold.

The same conformance to absolute standards is used to compare the quality of a range of competing products or services. An external agency may determine a set of criteria and test the quality of a range of similar products. The *Which?* reports are a typical example. Checking for quality may be pass/fail or it may be on a scale. The *Which?* reports provide a quality rating, as do final degree results in higher education institutions.

The standards approach to quality implies that quality is improved if standards are raised. A product that meets a higher standard is a higher quality product. This has been an overt approach in higher education where quality has been seen as the maintenance and improvement of *standards* (Church, 1988). Specifically, quality enhancement is seen in terms of improvements in the design and content of courses and in the validation procedures. The government judges quality in terms of meeting standards:

> Reports from Her Majesty's Inspectorate (HMI) suggest that the quality of education for students in polytechnics and colleges is being maintained and enhanced. The proportion of first and second class degrees awarded by universities, polytechnics and colleges has steadily increased during the 1980s. (HM Government, 1991, para. 9)

The excellence and standards approaches see quality and standards as inextricably linked (Church, 1988). For the excellence approach this would mean ensuring that what qualified as excellence, (say a first-class degree from Oxbridge) is not devalued as higher education faces continuing pressure on resources as the result of increased participation. Similarly, employers want standards maintained and, if possible, improved so that, for example, an upper second class degree in engineering continues to mean at least what it always has, and preferably includes the development of transferable skills (Burrows, Harvey & Green, 1992; Harvey, Burrows & Green, 1992; CIHE, 1987, 1988).

This approach to quality implicitly assumes that 'standards' are 'objective' and static (Walsh, 1991). However, standards are negotiated and subject to continued renegotiation in the light of changed circumstances. For example, in manufacturing, standards are unlikely to be just the technical standards imposed by the production department. Other departments internal to the organisation will have a role in determining these standards, such as the accounts, marketing and research departments. Externally, consumer preference, legislation, consumer watchdog organisations and so on will also have an impact on the standards. Marketing, of course, also influences consumer preference (Schudson, 1984; Williamson, 1986) while market research attempts to identify preferences. Standards, then, are relative despite appearances.

In education, the standards of a final degree classification appear to be absolutes—a gold standard against which performance may be measured (Alexander & Morgan, 1992). Indeed, the external examiner system attempts to ensure comparability across institutions.

> The concept of 'standard' implied by examination regulations is very simple: that there is a universally applicable notion of academic excellence; and that the qualities which distinguish a first from a second class degrees [*sic*] transcend subject matter, yet may be manifest through a candidate's performance in subject based examinations. . . . The realisation of common standards is difficult, yet that is the goal of the external examiner system. (CNAA/DES, 1989, p. 22)

The Reynolds Report (CVCP, 1986) and the ESRC funded study of the role of external examiners (CNAA/DES, 1989) both questioned the notion of a gold standard, although there was more scepticism about common standards in the University than in the PCFC sector. This is not altogether surprising as standards were paramount for the polytechnics as they strove to establish their courses as equal to those in universities. Quality was defined in terms of the standards. Good class degrees were difficult to get in the PCFC sector. The external examiner system in the universities has continued to

be criticised (Pease, 1986; CVCP Academic Audio Unit, 1992; Bembaum, 1992) despite a new code of practice (CVCP, 1989).

Whatever the concerns about cross-institutional, cross-subject and cross-temporal standards, there was a taken-for-granted view that common qualities existed by which to assess degree performance. Furthermore, there was a "large measure of agreement between externals and internals over standards" (CNAA/DES, 1989, p. 23). This quality control, along with a maintained level of resource input, reassured the higher education sector that standards were being maintained, and hence the quality was assured. Since the late 1980s standards have become a focus of concern. For some, the reduction in the average unit cost per student is seen as a threat to quality (Smyth, 1991; Westergaard, 1991; Jolliffe, 1992).

> Government and Industry are entitled to expect universities to be innovative and efficient, but repeated annual squeezes of unit cost will not deliver the desired expansion of HE at a quality necessary to face international competition. The provision of capital—which of course includes equipment—was particularly inadequate this year and the UK deserves a better policy for expansion than one based on marginal costs. (Harrison, 1991, p. 1)

For others, the increased participation rate threatens quality (Silver & Silver, 1986) not least because it means that entry standards will have to change. "The government wants 1 in 3 school leavers to enter higher education but only 1 in 7 achieve 2 'A' levels" (Crawford, 1992).

A problem of confounding standards with elitism clearly arises here. The government argues that more does not mean worse and endlessly refers to the increased proportion of first and upper second class degrees to justify unfunded expansion (HM Government, 1991; PCFC/UFC, 1992a, para. 251; Secretary of State for Education, 1988).

> The statistics speak for themselves, with the proportion of graduates in PCFC sector institutions gaining first and upper seconds having risen alongside the surge in student numbers. There are plenty of examples from HMI to show how increasing numbers need not adversely affect quality—quite the reverse. (Kenneth Clarke, then Secretary of State for Education and Science, DES, 1991)

Opponents run the risk of appearing elitist, yet those directly aware of the impact of resourcing on quality who argue that 'more does not mean worse', it just means different (Warwick, 1991) face criticism for endorsing the erosion of standards.

Universal standards are also undermined by the further extension of competition between institutions, encouraging them to find their niche in the 'education market' (Richards, 1992; Rothblatt, 1992).

The conformance to standards approach to quality, unlike the excellence or traditional approach, can cater for non-universal standards in higher education. It gives all institutions an opportunity to aspire to quality as different standards can be set for different types of institution (Crawford, 1992). Under this definition, it is perfectly possible to have a poor quality Rolls Royce and a high quality Mini (Oakland, 1989).

However, the introduction of relative rather than absolute standards by which to 'judge' institutions or courses raises issues of comparability. Quality as conformance to (relative) standards tells us nothing about the criteria used to set the standards. We may not agree that something is a quality product or service even if it conforms to the standards that have been set for it. This is a problem that arises out of the residual traditional notion of 'quality'. For quality to be conformance to relative standards seems

to undervalue the notion that quality implies something 'above the ordinary' and the conformance standards set may seem rather ordinary and in no way exceptional.

Finally, there is a practical issue of measurement when applying 'quality as exceptional' to higher education. We have seen that the apodictic traditional notion offers no basis for measuring or assessing quality. Both excellence 1 and conformance to standards imply that the quality of a service can be defined in terms of standards (either high or minimum) that are easily measurable and quantifiable. However, this may not prove to be a practical possibility in the case of higher education and is the subject of fierce debate. Indeed, it has been argued that the term quality control is not useful in an educational setting "[W]hat look like superficially attractive analogies can turn out to be dangerous metaphors, which work to redescribe the phenomena of education in terms that are not educational at all" (Taylor, 1981).

The tendency, in the commercial sector, has been to shift away from end-process 'quality control' to ensuring consistency of process.

Quality as Perfection or Consistency

A second approach to quality sees it in terms of consistency. It focuses on process and sets specifications that it aims to meet perfectly (Ingle, 1985). This is encapsulated in two interrelated dictums: *zero defects* and *getting things right first time*.

Excellence 2 (Zero Defects)

The notion of 'quality as excellence' opens the doors to emulators, to other claimants to the title. The emphasis on doing 'the right things well' can be shifted from inputs and outputs to process. Excellence 2 subverts exclusivity, it transforms the traditional notion of quality into something everybody can have. Excellence can be redefined in terms of *conformance to specification* rather than exceeding high standards (Harrington, 1988).

In this approach there is a distinction between quality and standards (Sallis & Hingley, 1991). Quality is that which conforms to a particular specification. The specification is not itself a standard nor is it assessed against any standards. The product or service is judged by its conformance to the specification (which is predefined and measurable). Conformance to specification takes the place of meeting (external) benchmark standards.

Excellence thus becomes 'zero defects' (Halpin, 1966; Crosby, 1979). The 'special' of excellence 1 becomes the 'perfect' of excellence 2. Perfection is ensuring that everything is correct, there are no faults. Furthermore, zero defects requires that perfection is delivered consistently. Reliability, taken for granted in the exceptional notion of quality, becomes the vehicle for claiming excellence in the perfection view of quality (Carter, 1978; Garvin, 1988). A quality product or service is one which conforms exactly to specification and a quality producer or service provider is one whose output is consistently free of defects.

Excellence 2 is not just about conforming to specification; it also embodies a philosophy of *prevention* rather than inspection (Peters & Waterman, 1982). The focus is on ensuring that at each stage faults do not occur, rather than relying on final inspection to identify defects. Zero defects is intrinsically bound up with the notion of a quality culture.

Quality Culture

A culture of quality is one in which everybody in the organisation, not just the quality controllers, is responsible for quality (Crosby, 1986). A quality culture involves a devolution of responsibility for quality. The organisation is reduced to a system of interrelated nodes (a single person or small team). Each node has inputs and outputs. These are the quality interfaces. The node plays a triple role as customer, processor and supplier. It is the responsibility of each node to ensure that its outputs fit the required inputs of receiver nodes and that it clearly specifies its required inputs to provider nodes. Quality is thus not only linked to customer requirements but is also assured at each stage in the production or delivery (Oakland, 1992).

Checking outputs—quality control—is anathema to a quality culture. On the contrary, the whole emphasis is on ensuring that things are 'done right first time' (Crosby, 1979, 1984). When they are not, then the process that has led to an unsatisfactory output is analysed so that corrections can be made in the process to ensure that the problem does not arise again. In a quality culture there is no need to check final output, indeed to do so is to shift responsibility away from those involved at each stage.

So, notions of zero defects and getting things right first time involve a philosophy of prevention embodied in a quality culture. The emphasis is on 'democratising' quality by making everyone involved in a product or process responsible for quality at each stage.

In reconceptualising excellence in terms of specification and process rather than standards of input and output, excellence 2 'democratises' excellence but also relativises it. There are no absolutes against which the output can be assessed, no universal benchmarks. In this sense, for example, a quality Volkswagen car is one that on delivery from the manufacturer exhibits no defects at all. This approach does not provide a basis for comparison with the specification of a Ford or a Honda.

The emphasis on process rather than inputs and outputs does not fit most perceptions of the quality of higher education. It raises issues about establishing, maintaining and checking standards.

However, in the light of what appears to be a gradual shift towards the American style 'market niche' college (Crawford, 1991b) and away from universal standards, the relativist notion of excellence may be more appropriate. The problem remains the sense in which one can talk about 'zero defects' or 'getting it right first time' in an educational setting. Higher education is not about delivering specifications in as near a perfect way as possible. It is, arguably, about encouraging, *inter alia*, the analytic and critical development of the student. This involves constant engagement with 'specifications', a process of reworking and reconceptualisation.

Quality as Fitness for Purpose

A third approach relates quality to the purpose of a product or service. This approach suggests that quality only has meaning in relation to the purpose of the product or service (Ball, 1985b; Reynolds, 1986; HMI, 1989a,b; Crawford, 1991a). Quality is thus judged in terms of the extent to which the product or service fits its purpose. This notion is quite remote from the idea of quality as something special, distinctive, elitist, conferring status or difficult to attain. It is a functional definition of quality rather than an exceptional one. If something does the job it is designed for then it is a quality product or service. Unlike the exceptional notion of quality, which, by definition, must be exclusive (even in the weaker standards checking approach) fitness for purpose, like 'zero defects', is inclusive.

Every product and service has the potential to fits its purpose and thus be a quality product or service.

Fitness for purpose has emerged as the fashionable way to harness the drive for perfection. The ultimate measure of perfection, 'zero defects', may be excellent as a definition of quality but runs the fatal risk of being perfectly useless. If the product does not fit its purpose then its perfection is irrelevant.

Although straightforward in conception, 'fitness for purpose' is deceptive (Moodie, 1986b), for it raises the issue of *whose purpose* and *how is fitness assessed*? Fitness for purpose offers two alternative priorities for specifying the purpose. The first puts the onus on the customer, the second locates it on the provider.

Fitness for Purpose 1 (FFP1)—customer specification

FFP1 identifies quality in terms of the extent to which a product or service meets the specifications of the customer. In principle, the customer is sovereign. The customer has requirements that become the specifications for the product and the outcome reliably matches these requirements. Thus a quality product is one that conforms to customer-determined specifications.

This approach provides a model for determining what the specification for a quality product or service should be. It is also developmental as it recognised that purposes may change over time, thus requiring constant re-evaluation of the appropriateness of the specification. It may be used to analyse quality in higher education at a number of levels. For example, if the purpose of higher education is to provide an appropriately educated work force, is the system as a whole providing the right number of graduates? Is a particular course providing the right balance of knowledge, skills and understanding?

Meeting requirements. The assumption is that a quality product, in meeting the specification, is *meeting customer requirements*. The idea that the customer determines the specification is, however, an idealisation. Meeting customer requirements is, in theory, about the customer specifying *in advance* what is required, and judging quality on the extent to which this is fulfilled.

The specifications may 'originate' with the customer but are likely to be mediated by cost, available technology, time, marketing (such as advertising) and so on. What the customer has in mind is likely to be in part the result of marketing strategies which, dialectically, determine and reflect consumer choices and expectations. Thus requirements are mediated before they become specifications.

Furthermore, in practice, customers rarely specify their individual requirements. On the contrary the producers of mass-produced products or provider of standardised services assesses what the customer is prepared to buy (via market research and assessment of sales, and so on) and produces or provides what it is capable of (given its capital investment and cost limitations) and targets production on consumers.

While customers' needs are seen as a crucial factor in the design of a product or service, they are something the producer or provider has to anticipate.

> The difficulty in defining quality is to translate future needs of the user into measurable characteristics, so that a product can be designed and turned out to give satisfaction at a price that the user will pay. [Thus], 'quality can be defined only in terms of the agent. Who is the judge of quality? (Deming, 1982)

In short, the customer requirements or needs are determined by the producer or provider. The customer is an 'ideal type' (Weber, 1969) that the dialectical process of market

research and advertising has defined. These 'ideal type' customers are persuaded that the specifications of the product or service reflect their requirements, needs or desires.

Ford's "everything we do is driven by you" campaign uses a pun to exploit the inevitable differential between customer requirement and mass-produced output while at the same time giving the impression that 'you', the idealised consumer, have determined the product. The emphasis in advertising is not so much on requirements as cultivating desires (Williamson, 1986). This cultivation of desires is often represented as needs, as in Vauxhall's "every car you'll ever need". It assures the customer that not only has account been taken of all conceivable specifications but that these specifications are what the customer needs.

Thus, the requirements of an individual customer are rarely reflected in a specification. Furthermore, irrespective of how the specifications are determined, the *process* of production or service provision is still in the hands of the provider. Quality, in the 'meeting requirements' approach, is judged on the output not process. Yet customers may, for example, want their requirements fulfilled in a manner that is 'environmentally friendly'.

This raises fundamental questions about the fitness for purpose definition of quality as 'meeting customer requirements'. This is a problem that, for two reasons, is further exacerbated in the context of higher education. First, the notion of 'customer' is itself a tricky, indeed contentious, concept in higher education. Is the customer the service user (the students) or those who pay for the service (the government, the employers)? Are other stakeholders, such as academic staff, included as customers (CIHE, 1987; Crawford, 1992; Elton, 1992; Burrows *et al.*, 1992)? Is the student the customer, the product, or both? (Collins, Cockburn & MacRobert, 1990). Although there is an issue over who the customers of higher education are, it is less contentious to talk of the students as the consumer of educational provision. They, after all, are the ones who pass through the system, consume what is on offer and emerge as 'educated'. However, it is wrong to think that students are the only direct consumers of higher education. Employers, (central and local government, large and small corporations) are also consumers of the product of education, whether this product is the graduates they recruit, training courses they send staff on, or research they contract out or collaborate on.

Second, the customer (the student for example) is not always able, nor necessarily in a position to specify what is required (Elton, 1992). How are students' requirements determined? Higher education students traditionally have opted for what is available to them. This may involve restricted choice owing to entry requirements, lack of available places on courses, lack of knowledge about the full range of courses, and so on. The specifications are not determined directly by the customer. At best, they may have some influence on determining the shape of the product once they are in the system. These vary from the selection of various options, through applying pressure to develop specific areas or introduce new ones, to taking an independent studies course (such as at Lancaster University (School of Independent Studies, 1991)) in which the student is the principal actor in determining the nature of the learning experience.

So students do not, by and large, specify the product. Their requirements are determined by the provider and these (for example in CNAA validated courses) have been in terms of what the student is assumed to need. Taking the view that it is the service user or student who is the customer, raises a number of difficulties, particularly in the evaluation of the service. It may be relatively easy to identify the physical needs of students in higher education in terms of access to adequate library provision and student accommodation. However, it is arguable that the heart of the education service

is the relationship between the lecturer and student in the teaching and learning process. Unlike manufacturing industry, the producers and customers (lecturers and students) are both part of the production process making the process individual and personal depending on the characteristics of both the producer and the consumer.

> The result of these characteristics is that standards of quality are difficult to state and maintain. In some cases services are not only physically but mentally intangible, because they are difficult to grasp and understand. (Walsh, 1991)

Defining quality in higher education as meeting customers' needs does not necessarily imply that the customer is always best placed to determine what quality is or whether it is present. This definition, therefore, also leaves open the question about who should define quality in higher education and how it should be assessed. Furthermore, there is

> an argument that in a service industry like education the definition of quality should go beyond merely meeting customer requirements and should be about 'delighting' customers. It is, of course, difficult to measure 'delight'. (Sallis & Hingley, 1991, p. 3)

Fitness for Purpose 2 (FFP2)—mission

The tricky issue of determining who are the customers of higher education and what their requirements are can be circumscribed by returning the emphasis to the institution. Rather than worry, in the first instance, about meeting customer requirements, quality can be defined in terms of the institution fulfilling its own stated objectives, or mission. FFP 2 has also been referred to as 'quality in fact' (Sallis & Hingley, 1991, p. 3).

> It is about being able to meet consistently the standard which the producer has set for itself. 'Quality in fact' is the basis of the quality systems devised in accordance with the British Standard Institution's 5750 standard.

The apparent shift towards an American-style, tiered, higher education system with each institution being encouraged to carve out its market niche appears to endorse the definition of quality in higher education as that of *fulfilling the mission* of the institution. Quality as 'fitness for purpose' becomes fitness for, and performance in, the market as perceived by the institution. "The market niche corresponds to the purpose" (Crawford, 1992).

This view of quality is also implied in the White Paper *Higher Education: A New Framework* (HM Government, 1991) in terms of the government's desire to ensure that new funding arrangements for teaching should be "related to and safeguard the best of the distinctive missions of individual institutions". A high quality institution is one which clearly states its mission (or purpose) and is efficient and effective in meeting the goals which it has set itself.

However, putting the onus on the institution to identify and fulfil a mission only partly resolves the problem of customer specification. There is still the problem of identifying whether the institution is achieving the purposes it set for itself in its mission statement. This is the role of quality assurance.

Quality assurance. Quality assurance is not about specifying the standards or specifications against which to measure or control quality. Quality assurance is about ensuring that there are mechanisms, procedures and processes in place to ensure that the desired quality, however defined and measured, is delivered. This, for example, was a

major aspect of the role of the Council for National Academic Awards through its validation function (Church, 1988).

The CVCP Academic Audit Unit (1991), 'guardians' of academic assurance in the current university sector, works on the basis that the universities individually determine their own definitions of quality and standards and the Unit, through its audit process, seeks to evaluate whether the quality assurance system that a university has established is successfully achieving its aims and objectives.

The assumption implicit in the development of quality assurance is that if mechanisms exist, quality can be assured. Government policy has focused on assurance, the White Paper (HM Government, 1991), for example, is primarily concerned with ensuring that institutions of higher education have quality control mechanisms in place.

Quality is in danger of becoming defined in terms of the existence of suitable mechanisms of quality assurance. The current vogue (particularly in further education) for seeking BS5750 registration is indicative of this shift. BS5750, or any other stamp of approval of assurance mechanisms tells you nothing about the quality *per se* only that there are processes in place in the institution for monitoring quality (Training, Enterprise and Development Group, 1990; Training Agency, 1990). BS5750 only sets the standard for the system, not the standards that the college should be achieving (Sallis & Hingley, 1991).

This drift towards quality assurance is also apparent in Europe. In the Netherlands, for example, it has been suggested that External Quality Assessment should focus on quality assurance because it is more important than the exact measurement of quality (Vroeijen-stijn, 1991).

> In conclusion it needs to be stressed that quality assurance is about good management practice. It is a systematic approach to doing the right things in the right way, and getting them right. It is about making certain there are systems in place so that the organisation continues to deliver the right things every time to meet customers' requirements. (Sallis & Hingley, 1991, p. 14)

A number of questions remain, however. Do quality assurance mechanisms *ensure* that students get what has been offered? Do they ensure that students know what they have been offered? Do they ensure that consumer requirements are met? Do they ensure that customers are 'delighted'? The assumption of mission-led fitness for purpose is that "if you get it right you will *delight* the customer or sponsor" (Crawford, 1992). This is a view that is met with some scepticism and, despite quality assurance, it is necessary to ask to what extent does the institutional mission represent quality for the consumer or customer?

> The problem with 'quality in fact' is that consumers may have a different conception of the quality of the product from the producer. In the last analysis it is the consumer who is the arbitrator of quality, because without customers there is no business. (Sallis & Hingley, 1991, p. 3)

Customer satisfaction. It is unlikely, even with increased competition and the encouragement of market niches, that there will be a completely 'free market' in education in which the corrective of customer satisfaction (Ishikawa, 1985; Shores, 1988) will operate to readjust missions. So some kind of mediating influence needs to be built into quality assurance.

Sallis & Hingley, (1991, p. 3) refer to customer-driven fitness for purpose as 'quality in perception' as it looks at quality from the consumer's viewpoint. This view of quality

argues that meeting specifications is necessary but not sufficient as "quality products have to appeal to consumers. Consumer satisfaction provides the evidence of quality".

Customer/consumer satisfaction in a higher education institution is the proxy assess- ment of quality based on the declared levels of satisfaction of the students (Mazelan *et al.*, 1991). In essence this is about the extent to which the 'product' is consistent with expectations. Students have very little information on which to make quality compari- sons and, in practice, do not draw direct links between satisfaction and quality (Roberts & Higgins, 1992). In fulfilling the requirements it sets itself, the course or institution mediates students' expectations and affects the satisfaction accordingly (Lloyd, 1992).

Students may be able to identify their short-term needs, but may not have enough knowledge and experience to know what they need in the long term. Thus they may not be in a position to judge whether their needs are being met. In essence, satisfying students' needs is not the same as satisfying their wants (Marchese, 1991).

Apart from mediating institutional quality assurance processes, students satisfaction may also affect the product. Widespread dissatisfaction among customers supposedly has, through the market or via direct pressure on providers, some *post hoc* effect on quality. The same *post hoc* pressure on course provision and institutional facilities may be exerted through student satisfaction. This can, of course, take informal forms, such as student sit-ins in libraries. However, in some institutions there is a formal linking of 'scientifically'-assessed student satisfaction to managerial quality improvement policies (O'Shea, Thomas & Green, 1989; Student Satisfaction Research Unit, 1991).

Nonetheless, satisfaction still leaves control of the product or service in the hands of the providers. In practice, the *post hoc* investigation of student satisfaction is the most likely arbiter of *fitness* for the mission-determined purpose. In short, educational institutions "need to be careful that they base their quality standards upon an analysis of customer wants and needs and not just upon their own definitions" (Sallis & Hingley, 1991, p. 3).

The problem with any fitness for purpose definition of quality in higher education is that it is difficult to be clear what the purposes of higher education should be. In recent years there have been few attempts amongst policy makers to define the purposes of higher education that have gone beyond that provided by the Robbins Committee. It stated that the objectives of higher education were "instruction in skills", "promotion of the general powers of the mind", "advancement of learning" and "transmission of a common culture and common standards of citizenship". The White Paper *Higher Education: Meeting the Challenge* (DES, 1987) took this definition and added to it "meeting the needs of the economy". However, different stakeholders in higher educa- tion may have different views about the purpose of higher education. Institutions (in a market-led competitive situation) will have different emphases leading to high quality in fitness for one purpose and low in relation to another purpose (Billing, 1986; Taylor, 1981), assuming, of course, that there is some means of *evaluating* the fitness for these defined purposes.

Quality as Value for Money

A populist notion of quality equates it with value (Ball, 1985a) and, in particular, value for money. 'Quality products at economy prices', 'Quality at a price you can afford' all imply a 'high standard' specification at reduced cost (Schrock & Lefevre, 1988). It is the antithesis of the blind faith in perfect competition that is the stock-in-trade of hi-fi dealers: 'you get what you pay for'. The idea that quality is equated with level of

specification and that it is directly related to cost refers back to the taken-for-granteds of 'exceptional' notions of quality. It ignores 'brand name' competition which is based on an assumption that the brand guarantees 'quality'.

Although quality is often popularly equated with value for money, quality is assessed against other criteria, such as standards, level of specification or reliability.

Nonetheless the political right has related quality to value for money (Pfeffer & Coote, 1991, p. 3) and the government has made use of this populist view of quality. Since the mid-1980s the government has forged a close link between quality of education and value for money (Jarratt, 1985; Church, 1988; Moodie, 1988) through its demand in the public sector for efficiency and effectiveness (Joseph, 1986; DES, 1987; Secretary of State for Education, 1988; Cave, Kogan & Smith, 1990). The White Paper clearly proposes a "continuing drive for greater efficiency" in education (HM Government, 1991, para. 15). The efficiency and effectiveness approach to funding, for example, underpins the new higher education funding methodology in Britain (PCFC/UFC, 1992a,b). It is axiomatic in the proposed annual 5% increase in student numbers with no comparable increase in resources.

At the heart of the value-for-money approach is the notion of accountability (Kogan, 1986a; European Commission, 1991). Public services are expected to be accountable to the funders (the taxpayer or, *de facto*, the Treasury) and to the 'customers' (the users of the service) (Pollitt, 1990). Parallelling the American model (National Governors' Association Report, 1986) British higher education has been faced with ever more explicit accountability requirements (PCFC, 1990b; Mazelan *et al.*, 1991).

In the USA the initial impetus for a serious re-evaluation of higher education came from demands for more accountability (Jennings, 1989; Cross, 1990; Hutchings & Marchese, 1990; Millard, 1991). However, the initial fears and concerns that political intervention engendered have subsided as higher education institutions have, in the main, been allowed to control the process of change and quality improvement (Edgerton, 1990; Ewell, Finney & Lenth, 1990; Marchese, 1990; Hanson, 1990).

Economic individualism, in the form of market forces and competition, underpins the close links between quality and value for money in higher education. The market-determined mission leads, in a competitive situation, inevitably to the notion of quality as *value for money*. The government wants to get more people into higher education with minimal extra investment. It "believes that the real key to achieving cost effective expansion lies in greater competition for funds and students" (HM Government, 1991, para. 17). Similarly, the government sees research funding as relying on competition. "To promote further the most effective use of resources within higher education, all institutions should be able to compete for research funds" (para. 40).

The government "considers it essential to have in place a funding mechanism which encourages the optimum use of recurrent and capital resources across the whole higher education system" (para. 19). The proposed new funding methodology for teaching links funding to quality assessment (PCFC/UFC, 1992a). This is done not with a view to using resources to improve 'poor quality' provision but to move resources away from poor provision and to encourage greater participation in 'good quality' provision.

Effectiveness is seen in terms of control mechanisms (quality audit), quantifiable outcomes (performance indicators (HM Government, 1991, paras 78–86)), observational ratings of teaching (such as the Q ratings in the PCFC sector) and research assessment exercises (Rudd, 1988). There is an implicit assumption that the market will take care of quality in the long run and that institutions can be left to ensure the quality of what they provide. The tendency is to see quality in term of FFP2, that is, provision fits the

institution's mission, but this is contingent upon the accountability implicit in quality as value for money. Sceptical commentators want safeguards and argue that the proper application of validation techniques is crucial for quality and value for money (Church, 1988).

Performance Indicators

Performance indicators have been developed, in part, to monitor efficiency. Staff–student ratios, indexes of revenue and capital resources, ratios of public to private funds, market share and examination results are principally used as crude measures of institutional (and programme) *efficiency* (HMI, 1990).

> As public interest in managerial efficiency and institutional effectiveness has increased, there has been a general acknowledgement of the need to use performance indicators to monitor the higher education system and for institutions to monitor their own efficiency and effectiveness. (HMI, 1990, p. 1)

Performance indicators have, as this suggests, a wider remit than efficiency indicators (Head, 1990; Yorke, 1991). The Morris Report states that they are "indicators of the health and quality of courses" (PCFC, 1990b) and have a role in "controlling the processes of higher education so that its nature and outputs are of satisfactory quality" (Church, 1988, p. 28). However, there is a danger that as they are better at measuring efficiency than effectiveness, that as their use becomes more widespread, quality becomes further entangled with value for money.

> It is fashionable in education these days to talk in terms of performance indicators for measuring quality. I am concerned that as performance indicators are tools which are employed to do a task that they should not be confused with the task itself. I believe that there is often a failure to define the purpose of the indicators and a tendency to accord most importance to those factors which can be measured most easily. Once markers are placed and scales developed in which numbers or parameters can emerge linking them to the measurement of quality, there is a danger that important qualitative aspects of performance and progress in higher education might be missed or submerged.
> (Sensicle, 1991, p. 16)

Performance indicators provide a measure of accountability for the Treasury. Accountability to the customers is encapsulated in customer charters.

Customer Charters

Customer charters specify what customers can expect for the money they pay. They have been developed in the public and privatised monopoly utility sector to compensate for the inadequacies of operation of the market. Eighteen charters have been produced to date, including the Parents' Charter in relation to education and the Patients' Charter in relation to the health service. Each contains a series of service standards which, if met, produce a quality service for the 'customer'.

Charters are often linked to the operation of 'watchdog' bodies to provide the customer with some resource if they are not getting a good deal. Charters are also supposed to inform the customer of what a 'good deal' amounts to. This function relates to the publication of league tables of results, such as health authority waitings lists,

school national curriculum test results, and so on. This supposedly allows consumers to make more informed choices.

One initiative from a British lecturers' union in higher education (NATFHE) has suggested "a policy of kite-marking courses" to guarantee basic standards of small group and personal tuition, seating at lectures and seminars, library provision, wheelchair access and childcare facilities (Meikle, 1991). Conversely, institutional managers have suggested that such charters should focus on teaching activities. For example, Trevor Watkin (South Bank University) has proposed that lecturers should start on time and written work should be returned punctually.

Customer charters, league tables and watchdog groups are all designed to create a pseudo-market so as to effect change through competition. The extent of their impact on quality in higher education is debatable. They may inform the criteria by which students judge satisfaction. However, as proposed student charters refer to minimum standards and are produced for, and not by students, they are likely to have little impact on improving or even maintaining quality.

Quality as Transformation

The transformative view of quality is rooted in the notion of 'qualitative change', a fundamental change of *form*. Ice is trans*formed* into water and eventually steam if it experiences an increase in temperature. While the increase in temperature can be measured the transformation involves a qualitative change. Ice has different qualities to that of steam or water. Transformation is not restricted to apparent or physical transformation but also includes cognitive transcendence. This transformative notion of quality is well-established in Western philosophy and can be found in the discussion of dialectical transformation in the works of Aristotle, Kant, Hegel and Marx. It is also at the heart of transcendental philosophies around the world, such as Buddhism and Jainism. More recently it has been entertainingly explored in Pirsig's (1976) *Zen and the Art of Motor Cycle Maintenance*.

This notion of quality as transformative raises issues about the relevance of a product-centred notion of quality such as fitness for purpose. There are problems, as we have seen, in translating product-based notions of quality to the service sector. This becomes particularly acute when applied to education (Elton, 1992). Unlike many other services where the provider is doing something *for* the consumer, in the education of students the provider is doing something *to* the consumer. This process of transformation is necessarily a unique, negotiated process in each case. The same reasoning applies to research. The provider does not just produce 'new knowledge' in a vacuum but is involved in transforming a given body of knowledge for particular purposes. Again, this transformation is not unidirectional, a dialectical process is taking place with a negotiated outcome (Kuhn, 1962, 1970; Price, 1963; Lakatos & Musgrave, 1970; Mullins, 1973; Holton, 1973).

Education is not a service *for* a customer but an ongoing process of transformation *of* the participant, be it student or researcher. This leads to two notions of transformative quality in education, enhancing the consumer and empowering the consumer.

Enhancing the Participant

A quality education is one that effects changes in the participants and, thereby, presumably enhances them. Value-added notions of quality provide a summative

approach to enhancement (Astin, 1985, 1991; Kogan, 1986b; Barnett, 1988; CNAA, 1990; PCFC, 1990a).

Value added. Value added is a 'measure' of quality in terms of the extent to which the educational experience enhances the knowledge, abilities and skills of students (HM Government, 1991, para. 80; HMI, 1990, p. 7). A high quality institution would be one that greatly enhances its students (Astin, 1990). Oxbridge may produce some 'brilliant' first class graduates, but having had brilliant school leavers in the first place they may not have added very much. An inner-city polytechnic may produce a good proportion of 2:1s from an intake of non-traditional entrants, unqualified returners, and so on, and therefore may be adding a tremendous amount. Exactly how much is added, however, depends on the methodology (Barnett, 1988; CNAA, 1990) and what is defined as being of value in the first place.

The measurement of value added, for example, in terms of input and output qualifications provides a quantifiable indicator of 'added value' but conceals the nature of the qualitative transformation.

Approaches that attempt to identify a number of dimensions of value added provide clearer ideas about what has been transformed but these still rely heavily on output assessment (Nichols, 1986; NCVQ/SCOTVEC, 1990; DTI/CIHE, 1990; Engineering Professors' Conference, 1991; Otter, 1992).

Arguing against a *fitness for purpose approach,* Müller & Funnell (1992, p. 2) argue that quality should be explored in terms of a wide range of factors leading to a notion of 'value addedness'. The role of educational providers from this perspective is to ensure that:

> learners fully participate in, and contribute to, the learning process in such a way that they become responsible for creating, delivering and evaluating the product. (Müller & Funnell, 1992, p. 175)

In short, learners should be both at the centre of the process by which learning is evaluated and at the centre of the learning process. Feedback from learners is a crucial aspect of evaluation (Müller & Funnell, incidentally, prefer qualitative rather than quantitative methods as they better explore learners' perceptions of quality). Placing the learner at the centre shifts the emphasis from the value-added measures of enhancement to empowerment.

Empowering the Participant

The second element of transformative quality is empowerment (Harvey & Burrows, 1992). This involves giving power to participants to influence their own transformation. This is much more than the accountability to the consumer to be found in customer charters. Consumerist charters essentially keep producers and providers on their toes, but rarely affect decision-making processes or policy. The control remains with the producer or provider.

Empowering the employee in order to capitalise on their knowledge and skill is a well-established strategy in the business world (Stratton, 1988). Empowering the participant in education does two things. First, it involves them in decision-making that affects their transformation, "to some extent the learner must take ownership of the learning process and . . . responsibility for determining the style and mode of delivery of learning" (Müller & Funnell, 1992, p. 1). Second, the transformation process itself provides the opportunity for self-empowerment with consequent impact upon decision-

making processes that affect the participant (Roper, 1992). For example, educational transformation may lead to increased awareness and confidence. This in turn affects the role that the participant has in making decisions about his or her own educational transformation which in turn further empowers by increasing self-confidence, political acumen, critical awareness, and so on. There is, potentially, a continual spiral of empowerment for the participant embracing the transformative process.

There are four ways of empowering students. First, students can be empowered via *student evaluation*. Empowerment in this sense is similar to policy-linked student satisfaction feedback.

Second, students can be guaranteed minimum standards of provision and given responsibility for monitoring as in the examples of student charters mentioned above.

Third, students can be given control over their own learning. This ranges from allowing students to *select* their own curriculum via a suite of option and elective subjects or through modularisation to students entering into a learning *contract*. Selecting options means choosing *teaching*, and while superficially liberating this does not necessarily empower the student. Choices may be ill-informed and the composite may not add up to a 'deep' learning experience (Ramsden, 1986). Learning contracts empower the student to negotiate a *learning* experience. Students control how they learn and when and how it is assessed by "constructing their own degree scheme" (School of Independent Studies, 1985).

Fourth, students' critical ability can be developed. This approach attempts to empower students not just as customers in the education process but for life. This requires an approach to teaching and learning that goes beyond requiring students to learn a body of knowledge and be able to apply it analytically. Critical thinking is about encouraging students to challenge preconceptions; their own, their peers and their teachers.

Wiggins (1990) argues that empowerment through the development of critical thinking is not only important, but failing to do it is also dangerous. "If one gets better and better at what one does, one is less and less likely to question what one knows" (Wiggins, 1990, p. 19). He argues that in higher education

> we have a *moral obligation to disturb students intellectually*. It is too easy nowadays, I think, to come to college and leave one's prejudices and deeper habits of mind and assumptions unexamined—and be left with the impression that assessment is merely another form of jumping through hoops or licensure in a technical trade. (Wiggins, 1990, p. 20)

Developing critical thinking, for Wiggins, involves getting students to learn to justify their opinions; recognise and provide quality work; be self-critical; develop a style; formulate questions; analyse 'paradigms'; be honest about their ignorance; and be able to self-assess. This requires that students are treated as intellectual performers and that any system of assessment is clear, public, and an integral part of the learning process, not an 'add-on' (Paskow, 1990, p. 4).

In this last sense of empowerment, quality is seen in terms of the extent to which the education system transforms the *conceptual* ability and *self-awareness* of the student. It involves a process that is threatening to academics because "it embodies not just a loss of control over the structural organisation or academic content of higher education, it is a loss of control over the intellectual processes" (Harvey & Burrows, 1992, p. 3). Empowering the learner, in higher education, means empowering students and conceding some autonomy to collaborators, such as employers. It involves the consumer in setting

standards, endorsing practices, specifying curricula, and so on. Quality is judged in terms of the democratisation of the process, not just the outcome.

Quality as transformation involves a curious paradox because it is also equated with the exceptional. *Empowerment* and value added notions of quality lead us back to excellence 1, to 'doing the right things well'. For an excellent institution is surely one that adds most value to the student or empowers the student for life after college.

Astin, for example, argues that value added actually measures *excellence*. Excellent institutions are the ones that "have the greatest impact—'add the most value,' as economists would say—to students' knowledge and personal development" (Astin, 1990, p. 25).

Wiggins also argues not for 'academic mastery' (that is, the 'competent presentation of other people's ideas') but for *excellence. He sees excellence in terms of standards.* Empowering students must be measured against some form of 'standard' of critical thinking.

> We have to think about rigor. We need to think about alternative assessments
> as more than just engaging students better, which it invariable does.... We
> need truly standard-setting and standard-revealing measurement.... The test
> should reveal something not only about the student but about the tasks at the
> heart of the subject—its standards. (Wiggins, 1990, p. 20)

Empowerment must lie at the heart of a quality culture in education. If nodes are to be delegated responsibility as customers, suppliers and processors then students, who are an integral part of the transformative process, must also be delegated responsibility. However, such empowerment must go beyond expecting students to 'get things right first time'.

A Note on TQM

The reader may be surprised that there has been only a passing mention of total quality management (TQM) despite the use of many of the concepts associated with it, such as quality culture and fitness for purpose. This has been deliberate, because TQM means different things to different people (Ishikawa, 1976; Taguchi, 1986; Deming, 1982; Scherkenbach, 1988; Juran & Gryna, 1980; Oakland, 1990; Bendell, 1991; Drummond, 1992). *TQM is not so much a view of quality as a way of confronting organisational challenges.* "TQM is quintessential common-sense" (Crawford, 1992) directed at organisation-wide quality planning (Juran, 1988).

It is a philosophy with a number of practical suggestions for its own self-perpetuation and implementation. Essentially it is a philosophy that can be simply summed up as 'doing things properly' in order to maximise competitiveness and profit (Juran, 1964; Crosby, 1979). The practical suggestions for implementation have filled numerous books (Feigenbaum, 1983; Hagan, 1987; Hayes, 1985; Ishikawa, 1985; Walsh, Wurster & Kimber, 1986; Gitlow & Gitlow, 1987; Porter & Oakland, 1992). Implementation strategies are behaviourist (Hurley, 1992) and reductionist. In essence, organisations are broken down into communicating nodes. Attention is focussed on input–output interfaces (Oakland, 1989). In this respect TQM closely resembles 'systems analysis' (Clifton, 1983; Wood-Harper, Antill & Avison, 1985). Like systems analysis, TQM is holistic but also disaggregates. It too suffers from the insularity of mission-specific nodal groups (Stratton, 1988). However, reductionism and disaggregation simply deal with the surface relationships and *conceal the complex interrelationship of the parts with the whole*

beneath a superficial gloss of democratic responsibility. An organisation, as systems analysts have found to their cost, may appear to have a logical reductionist structure but in practice is infinitely complex, as any sociologist of organisations could have told them (Silverman, 1970). The formal and informal structures and practices rarely coincide. More importantly, the individual is not just part of the node but relates to the organisation and to the wider social milieu.

Systems analysis is plagued by mechanistic methodologies. They clash with non-formal organisational practices, ride roughshod over the conceptual frameworks of those who work in the organisation and fail to adopt a totalistic approach despite their holistic genesis (Harvey, 1989). It is here, in theory, that TQM differs from systems analysis. Rather than apply a methodology from above, TQM reflects the 'soft systems' approach (Checkland, 1981) and evolves out of existing processes. At the same time it attempts to improve the *quality* of existing practices by transforming the way in which processes are organised rather than simply replace them with an identical structure, orchestrated through information technology, as is the case with most system analysis methodologies (Downes, Clare & Coe, 1987; Comes, 1988).

TQM overtly includes two different conceptions of quality; quality as consistency and quality as fitness for purpose. TQM attempts to bring together quality as fitness for purpose and quality as perfection by seeing fitness for purpose in the context of quality culture. TQM also implies, and sometimes openly calls for, a notion of quality as transformation. In fact it is this which lies at the heart of its philosophy. TQM involves changing attitudes (Juran, 1964) and has been described as a way of life (Harrington, 1987) or a religion (Crawford, 1991b). The 'converted' are those who grasp its transformational potential.

TQM provides a simple, straightforward and, some would have it, foolproof solution to quality through fitness for purpose and quality assurance. However, in any circumstance it is fraught with dangers and difficult to implement, as even its most ardent supporters will admit. In applying it to higher education, it may itself be transformed out of all recognition. The transformative heart may well remain intact but managerial control is in danger of being overwhelmed by a quality culture that takes empowerment to its logical conclusion.

Conclusion

In the last resort quality is a philosophical concept. Definitions of quality vary and, to some extent, reflect different perspectives of the individual and society. In a democratic society there must be room for people to hold different views: there is no single correct definition of quality. Indeed, we may catch ourselves switching from one perspective to another without being conscious of any conflict. Rather than grapple with the different conceptions of quality some have opted out of trying to find an underlying theory or definition for quality (Dochy *et al.*, 1990; Moodie, 1986a). Vroeijenstijn (1991) says "It is a waste of time to try to define Quality". The basis of this view is that quality is 'stakeholder-relative'. For example, the focus of attention for students and lecturers might be on the process of education while the focus of employers might be on the outputs of higher education. It is not possible, therefore to talk about quality as a unitary concept; quality must be defined in terms of a range of qualities. At best perhaps, we should define as clearly as possible the criteria that each stakeholder uses when judging quality and for these competing views to be taken into account when assessments of quality are undertaken.

Reaching the conclusion that we might all have different understandings of quality in higher education and that none of us is necessarily wrong or right does not mean, however, that we are absolved of the responsibility for maintaining and enhancing quality. It is merely the adoption of a pragmatic attitude. In practical terms decisions have to be taken: courses have to be approved or turned down, funding has to be allocated, new lecturers have to be appointed in competition with others. The pragmatic approach determines a set of criteria that reflect common-sense aspects of quality and then seeks out convenient measures by which to quantify quality. Unfortunately, this approach sometimes works in reverse. Convenient measures are eagerly seized upon and a rationale constructed to give them credibility in measuring quality. The *ad hoc* use of performance indicators is a case in point.

Looking at the criteria different interest groups use in judging quality rather than starting with a *single definition* of quality might offer a practical solution to a complex philosophical question. Not because it is atheoretical, but because it recognises and acknowledges the rights of different interest groups to have different perspectives. On the other hand, if we want to find a core of criteria for assessing quality in higher education it is essential that we understand the different conceptions of quality that inform the preferences of different stakeholders.

Notes on Contributors

LEE HARVEY is Senior Research Fellow for the national Quality in Higher Education Project, based at the University of Central England in Birmingham. He has a social science background and has taught social research methodology at undergraduate and postgraduate level for many years. *Correspondence:* QHE, Baker Building, University of Central England in Birmingham, Perry Barr, Birmingham B42 2SU.

DIANA GREEN is Pro-Vice Chancellor of the University of Central England in Birmingham where she is responsible for strategic planning and resources. She is a member of several national and international organisations concerned with quality assurance and is currently Director of three major projects concerned with quality assessment, assurance and improvement. She is a member of the Governing Council and Research and Development Committee of the Society for Research into Higher Education and is on the Research Resources Board of the ESRC. *Correspondence:* University of Central England in Birmingham, Perry Barr, Birmingham B42 2SU.

REFERENCES

ALEXANDER, D. & MORGAN, J. (1992) Quality Assurance in a European Context, Paper presented at the AETT conference on 'Quality in Education', University of York, 6–8 April 1992.
ASTIN, A. W. & SOLOMON, L. C. (1981) Are reputational ratings required to measure quality?, *Change*, 13(7), pp. 14–19.
ASTIN, A. W. (1985) *Achieving Educational Excellence* (San Francisco, Jossey Bass).
ASTIN, A. W. (1990) Assessment as a tool for institutional renewal and reform, in: American Association for Higher Education Assessment Forum, *Assessment 1990: Accreditation and Renewal*, pp. 19–33. (Washington, DC, AAHE).
ASTIN, A. W. (1991) *Assessment for Excellence: The philosophy and practice of assessment and evaluation in higher education* (New York, American Council on Education and Macmillan).
BALL, C. J. E. (1985a) What the hell is quality?, in: C. J. E. BALL (Ed.) *Fitness for Purpose—Essays in Higher Education*, pp. 96–102. (Guildford, SRHE & NFER/Nelson).
BALL, C. J. E. (Ed.) (1985b) *Fitness for Purpose* (Guildford, SRHE & NFER/Nelson).

BARNETT, T. (1988) Entry and exit performance indicators for higher education: some policy and research issues, *Assessment and Evaluation in Higher Education*, 13(1), pp. 16–30.

BENDELL, A. (1991) *The Quality Gurus: What can they do for your Company?* (London, Department of Trade and Industry).

BERNBAUM, G. (1992) Quality and Academic Audit, Paper presented at the 'Quality by Degrees' Conference at Aston University, 8 June 1992.

BILLING, B. (1986) Judging Institutions, in:. G. C. MOODIE (Ed.) *Standards and Criteria in Higher Education*, pp. 65–89. (Guildford, SRHE & NFER/Nelson).

BURROWS, A. & HARVEY, L. (1992) Defining quality in higher education: the stakeholder approach, paper to the AETT conference on 'Quality in Education', University of York, 6–8 April 1992.

BURROWS, A., HARVEY, L. & GREEN, D. (1992) *Is Anybody Listening? Employers' Views on Quality in Higher Education* (Birmingham, QHE).

CARTER, C. L. JR. (1978) *The Control and Assurance of Quality, Reliability, and Safety* (Milwaukee, American Society for Quality Control).

CAVE, M., KOGAN, M. & SMITH, R. (Eds) (1990) *Output and Performance Measurement in Government— The State of the Art* (London, Jessica Kingsley).

CHECKLAND, P. (1981) *Systems Thinking, Systems Practice* (Chichester, Wiley).

CHURCH, C. H. (1988) The qualities of validation, *Studies in Higher Education*, 13, pp. 27–43.

CLIFTON, H. D. (1983) *Business Data Systems: A Practical Guide to Systems Analysis and Data Processing* (2nd ed.) (London, Prentice-Hall).

COLLINS, C., COCKBURN, M. & MACROBERT, I. (1990) *The Applicability of BS5750 to College Operations*, First Year Report, Nov. 1989–Oct. 1990 (Wednesbury, Sandwell College of Further and Higher Education).

COMMITTEE FOR VICE CHANCELLORS AND PRINCIPALS OF UNIVERSITIES IN THE UNITED KINGDOM (CVCP) ACADEMIC AUDIT UNIT (1991) *Notes for the Guidance of Auditors* (Birmingham, CVCP).

COMMITTEE FOR VICE CHANCELLORS AND PRINCIPALS OF UNIVERSITIES IN THE UNITED KINGDOM (CVCP) ACADEMIC AUDIT UNIT (1992) *Annual Report of the Director 1990/91* (Birmingham, CVCP Academic Audit Unit).

COMMITTEE FOR VICE-CHANCELLORS AND PRINCIPALS OF UNIVERSITIES IN THE UNITED KINGDOM (CVCP) (1986) *Academic Standards in Universities* (with an introduction by Prof. P. A. Reynolds) (London, CVCP).

COMMITTEE FOR VICE CHANCELLORS AND PRINCIPALS OF UNIVERSITIES IN THE UNITED KINGDOM (CVCP) (1989) *Academic Standards in Universities—A paper on external examining in universities at first degree and taught master's level*, Report, July (London, CVCP).

CORNES, R. (1988) The Government Way, *The Guardian*, 25 Feb. 1988, p. 23.

COUNCIL FOR INDUSTRY AND HIGHER EDUCATION (CIHE) (1987) *Towards a Partnership: Higher Education—Government—Industry* (London, CIHE).

COUNCIL FOR INDUSTRY AND HIGHER EDUCATION (CIHE) (1988) *Towards a Partnership: The Company Response* (London, CIHE).

COUNCIL FOR NATIONAL ACADEMIC AWARDS AND DEPARTMENT OF EDUCATION AND SCIENCE (CNAA/DES) (1989) *The role of external examiners: A summary of the principal findings of a project on the role of the external examiners in undergraduate course in the United Kingdom during 1986* (Swindon, ESRC).

COUNCIL FOR NATIONAL ACADEMIC AWARDS (CNAA) (1990) *The Measurement of Value Added in Higher Education* (London, CNAA).

CRAWFORD, F. W. (1991a) Total Quality Management, unpublished discussion paper prepared for the CVCP Residential meeting on 24-26 Sept. 1991.

CRAWFORD, F. W. (1991b) *Total Quality Management*, CVCP Occasional Paper (London, CVCP).

CRAWFORD, F. W. (1992) Total Quality Management, paper to the 'Quality by Degrees' Conference at Aston University, 8 June 1992.

CROSBY, P. B. (1979) *Quality is Free* (New York, McGraw-Hill).

CROSBY, P. B. (1984) *Quality Without Tears: The art of hassle-free management* (New York, McGraw-Hill).

CROSBY, P. B. (1986) *Running Things—The art of making things happen* (Milwaukee, American Society for Quality Control).

CROSS, K. P. (1990) Streams of thought about asessment, in: AAHE Assessment Forum, *Assessment 1990: Understanding the Implications*, pp. 1–14. (Washington, DC, American Association for Higher Education, Assessment Forum Resource).

DEARING, SIR R. (1991) Findings, paper to the CBI Conference on Higher Education in the 1990s, 21 November 1991.

DEMING, W. E. (1982) *Out of the Crisis—Quality, Productivity and Competitive Position* (Cambridge, Cambridge University Press).

DEPARTMENT OF EDUCATION AND SCIENCE (DES) (1987) *Higher Education: Meeting the Challenge*, White Paper, Cm. 114 (London, HMSO).

DEPARTMENT OF EDUCATION AND SCIENCE (DES) (1991) Clarke tells Polytechnics to plan for changes next year, *The Department of Education and Science News*, 294/91, 17/9/91.

DEPARTMENT OF TRADE & INDUSTRY AND COUNCIL FOR INDUSTRY AND HIGHER EDUCATION (DTI/CIHE) (1989) *Policy and Strategy for Companies* (London, HMSO).

DEPARTMENT OF TRADE & INDUSTRY AND COUNCIL FOR INDUSTRY AND HIGHER EDUCATION (DTI/CIHE) (1990) *Getting Good Graduates* (London, HMSO).

DOCHY, F. J. R. C., SEGERS, M. S. R. & WIJNEN, W. H. F. W. (1990) Preliminaries to the implementation of a quality assurance system based on management information and performance indicators, in: F. J. R. C. DOCHY, M. S. R. SEGERS & W. H. F. W. WIJNEN (Eds) *Management Information and Performance Indicators in Higher Education: an International Issue*, pp. 69–94. (Van Gorcum, Assen/Maastricht).

DOWNES, E., CLARE, P. & COE, I. (1987) *SSADM: Application and Context* (London, Prentice-Hall).

DRUMMOND, H. (1992) *The Quality Movement* (London, Kogan Page).

EDGERTON, R. (1990) Editorial: Assessment at half times, *Change*, Sep/Oct, pp. 4–5. (Washington, DC).

ELTON, L. (1992) University Teaching: A professional model for quality and excellence, paper to the 'Quality by Degrees' Conference at Aston University, 8 June 1992.

ENGINEERING PROFESSORS' CONFERENCE (1991) *The Future Pattern of First Degree Courses in Engineering*, Discussion paper.

EUROPEAN COMMISSION (1991) *Memorandum on Higher Education in the European Community*, Communication from the Commission to the Council, Green Paper, Brussels.

EWELL, P., FINNEY, J. & LENTH, C. (1990) Filling in the mosaic: the emerging pattern of state-based assessment, *AAHE Bulletin*, April, pp. 3–5.

FEIGENBAUM, A. V. (1983) *Total Quality Control* (3rd ed.) (New York, McGraw-Hill).

FRACKMANN, E. (1991) Quality Assurance in German Higher Education, paper presented at a conference on quality assurance in higher education in Hong Kong on 15–17 July 1991.

GARVIN, D. A. (1988) *Managing Quality: The strategic and competitive edge* (London, Collier Macmillan).

GIBSON, A. (1986) Inspecting education, in: G. MOODIE (Ed.) *Standards and Criteria in Higher Education*, pp. 128–135. (Guildford, SRHE).

GITLOW, H. S. & GITLOW, S. J. (1987) *The Deming Guide to Quality and Competitive Position* (Englewood Cliffs, New Jersey, Prentice-Hall).

GOODLAD, S. (1988) Editorial, *Studies in Higher Education*, 13, pp. 3–4.

HAGAN, J. T. (Ed.) (1987) *The Management of Quality: Preparing for a competitive future* (Milwaukee, ASQC Quality Costs Committee).

HALPIN, J. (1966) *Zero Defects: A new dimension in quality assurance* (New York, McGraw Hill).

HANSON, D. C. (1990) Federal disclosure regulations, *AAHE Bulletin*, April, pp. 9–10. Washington, DC.

HARRINGTON, H. J. (1987) *The Improvement Process: How America's leading companies improve quality* (Milwaukee, American Society for Quality Control).

HARINGTON, H. J. (1988) *Excellence—The IBM Way* (Milwaukee, American Society for Quality Control).

HARRISON, D. (1991) Challenges and opportunities for institutions, paper to the CBI Conference on Higher Education in the 1990s, 21 November 1991.

HARVEY, L. (1989) Are there any information system methodologies?, unpublished paper, Birmingham Polytechnic.

HARVEY, L. & BURROWS, A. (1992) Empowering Students, *New Academic*, 1(3), Summer.

HARVEY, L., BURROWS, A. & GREEN, D. (1992) *Someone Who Can Make an Impression*, Report of the Employers' Survey of Qualities of Higher Education Graduates (Birmingham, QHE).

HAYES, G. E. (1985) *Quality and Productivity: The new challenge* (Milwaukee, American Society for Quality Control).

HEAD, P. (1990) *Performance Indicators and Quality Assurance*, Information Services Discussion paper, 4 June 1990 (London, CNAA).

HM GOVERNMENT (1991) *Further and Higher Education Bill*, HL Bill 4 50/5 (London, HMSO).

HMI (1989a) In pursuit of quality: an HMI view, in: *Quality in Higher Education*, a report on an HMI Invitation Conference at Heythrop Park, 16–18 June 1989 (London, HMI).

HMI (1989b) Conference conclusions, in: *Quality in Higher Education*, pp. 24–25, a report on an HMI Invitation Conference at Heythrop Park, 16–18 June 1989 (London, HMI).

HMI (1990) *Performance Indicators in Higher Education*, a report by HMI, Reference 14/91/NS, Jan.–April 1990 (London, DES).

HOLTON, G. (1973) *Thematic Origin of Scientific Thought: Kepler to Einstein* (Cambridge, Harvard University Press).

HURLEY, B. (1992) TQ implementation: cultural issues and training, paper to the AETT conference on 'Quality in Education', University of York, 6–8 April 1992.

HUSSERL, E. (1969) *Cartesian Meditations* (The Hague, Martinus Nijhoff).

HUTCHINGS, P. & MARCHESE, T. (1990) Watching Assessment: questions, stories, prospects, *Change*, Sep./Oct., pp. 12–38 (Washington, DC).

INGLE, S. (1985) *In Search of Perfection: How to create/maintain/improve quality* (Englewood Cliffs, Prentice-Hall).

ISHIKAWA, K. (1976) *Guide to Quality Control* (Tokyo, Asian Productivity Organisation).

ISHIKAWA, K. (1985) *What Is Total Quality Control? The Japanese Way* (Englewood Cliffs, Prentice-Hall).

JARRATT, A. (1985) *Efficiency Studies in Universities* (London, CVCP).

JENNINGS, E. T. JR. (1989) Accountability, program quality, outcome assessment, and graduate education for public affairs and administration, *Public Administration Review*, 49(5).

JOLLIFFE, T. (1992) Custodians of Quality, *Lecturer*, 5, June, p. 7.

JOSEPH, K. (1986) Degree courses in the public sector: quality and validation (London, DES Circular).

JURAN, J. M. (1964) *Managerial Breakthrough: A new concept of the manager's job* (New York, McGraw-Hill).

JURAN, J. M. (1988) *Juran on Planning for Quality* (New York, The Free Press).

JURAN, J. M. & GRYNA, F. M. JR. (1980) *Quality Planning and Analysis* (2nd ed.) (New York, McGraw-Hill).

KOGAN, M. (1986a) *Educational Accountability* (London, Hutchinson).

KOGAN, M. (Ed.) (1986b) *Evaluating Higher Education—Papers from the Journal of Institutional Management in Higher Education* (London, Jessica Kingsley).

KUHN, T. S. (1962) *The Structure of Scientific Revolutions* (Chicago, University of Chicago Press).

KUHN, T. S. (1970) *The Structure of Scientific Revolutions* (2nd ed., enlarged with postscript) (Chicago, University of Chicago Press).

LAKATOS, I. & MUSGRAVE, A. (Eds) (1970) *Criticisms and the Growth of Knowledge* (Cambridge, Cambridge University Press).

LLOYD, R. (1992) Foreword, in: D. ROBERTS & T. HIGGINS (Eds) *Higher Education: The student experience. The findings of a research programme into student decision-making and consumer satisfaction*, pp. iii–iv (Leeds, Heist).

MARCHESE, T. (1990) Assessment's next five years, *AIR Newsletter*, Special Supplement, Fall–Winter, 1990–1, pp. 1–4 (Washington, DC).

MARCHESE, T. (1991) T.Q.M. reaches the academy, draft paper, American Association for Higher Education.

MAZELAN, P., BRANNIGAN, C., GREEN, D., TORMAY, P. & O'SHEA, J. (1991) Using measures of student satisfaction: the implications of a user-led strategy of quality assurance in higher education, *Broadcast*, 18, Winter, pp. 4–5.

MEIKLE, J. (1991) A higher flying kite-mark, *The Guardian*, 15/10/91, p. 25.

MILLARD, R. M. (1991) Governance, Quality and Equity in the United States, in: R. O. BERDAHL, G. C. MOODIE & I. J. SPITZBERG JR. (Eds) *Quality and Access in Higher Education—Comparing Britain and the United States*, pp. 58–74 (Buckingham, SRHE and the Open University Press).

MILLER, L. H. (1990) Hubris in the Academy: can teaching survive the overweening quest for excellence?, *Change*, September/October, 9ff.

MOODIE, G. C. (Ed.) (1986a) *Standards and Criteria in Higher Education* (Guildford, SHRE & NFER/Nelson).

MOODIE, G. C. (1986b) Fit for what?, in: G. C. MOODIE (Ed.) *Standards and Criteria in Higher Education*, pp. 1–8 (Guildford, SRHE & NFER/Nelson).

MOODIE, G. C. (1988) The debates about higher education quality in Britain and the USA, *Studies in Higher Education*, 13, pp. 5–13.

MÜLLER, D. & FUNNELL, P. (1992) Exploring learners' perceptions of quality, paper presented at the AETT conference on 'Quality in Education', University of York, 6–8 April 1992.

MULLINS, N. C. (1973) *Theory and Theory Groups in Contemporary American Sociology* (New York, Harper and Row).

NATIONAL GOVERNORS' ASSOCIATION (1986) *Time for Results: The Governors' 1991 Report on Education* (Washington, DC, National Governors' Association).

NCVQ/SCOTVEC (1990) *Joint Statement*, September 1990 (NCVQ/SCOTVEC).

NICHOLS, C. C. (1986) Quality criteria and definitions, expectations and objectives: an industrial perspective, in: Higher Education International *Quality Assurance in First Degree Courses: Proceedings of the Third Annual Conference* (London, Higher Education International).

OAKLAND, J. S. (1989) *Total Quality Management* (London, Heinemann).

OAKLAND, J. S. (1990) *Total Quality Management—a practical approach* (London, Department of Trade and Industry).

OAKLAND, J. S. (1992) A TQM model for education and training, Keynote speech to the AETT conference on 'Quality in Education', University of York, 6–8 April 1992.

O'SHEA, J., THOMAS, K. & GREEN, D. (1989) *Evaluating Satisfaction with Educational Experience Among Part-time Students*, Report to CNAA (plus Supplement) (Birmingham, Birmingham Polytechnic).

OTTER, S. (1992) Learning outcomes: a quality strategy for higher education, paper to the 'Quality by Degrees' Conference at Aston University, 8 June 1992.

PASKOW, J. (Ed.) (1990) *Assessment Programs and Projects: A Directory* (Updated by E. Francis) (Washington, American Association for Higher Education).

PEASE, K. (1986) Confessions of an external examiner, *Times Higher Education Supplement*, 2 May 1986.

PETERS, T. J. & WATERMAN, R. H. (1982) *In Search of Excellence: Lessons from America's Best-Run Companies* (New York, Harper and Row).

PFEFFER, N. & COOTE, A. (1991) *Is Quality Good for You? A critical review of quality assurance in welfare services* (London, Institute of Public Policy Research).

PIRSIG, R. M. (1976) *Zen and the Art of Motorcycle Maintenance: An inquiry into values* (London, Corgi).

POLLITT, C. (1990) Doing Business in the Temple? Managers and Quality Assurance in the Public Services, *Public Administration*, 68, Winter, 1990, pp. 435–452.

POLYTECHNICS AND COLLEGES FUNDING COUNCIL AND UNIVERSITIES FUNDING COUNCIL (PCFC/UFC) (1992a) *A Funding Methodology for Teaching in Higher Education* (Bristol, PCFC).

POLYTECHNICS AND COLLEGES FUNDING COUNCIL AND UNIVERSITIES FUNDING COUNCIL (PCFC/UFC) (1992b) *The Funding of Teaching in Higher Education* (Bristol, PCFC).

POLYTECHNICS AND COLLEGES FUNDING COUNCIL (PCFC) (1990a) *The Measurement of Value Added in Higher Education*, Summary of the joint PCFC/CNAA Project Report, October 1990 (London, PCFC).

POLYTECHNICS AND COLLEGES FUNDING COUNCIL (PCFC) (1990b) *Performance Indicators: Report of a Committee of Enquiry chaired by Mr Alfred Morris*, June (London, PCFC).

PORTER, L. J. & OAKLAND, J. S. (1992) Developing the European Quality Model: The Implementation of Total Quality Management at the Management Centre, University of Bradford, paper presented at the AETT conference on 'Quality in Education', University of York, 6–8 April 1992.

PRICE, D. J. DE S. (1963) *Little Science, Big Science* (New York, Columbia University Press).

RAMSDEN, P. (1986) Students and Quality, in: G. C. MOODIE (Ed.) *Standards and Criteria in Higher Education*, pp. 157–170. (Guildford, SRHE & NFER/Nelson).

REYNOLDS, P. A. (1986) *Academic Standards in Universities* (London, CVCP).

RICHARDS, H. (1992) University opt-out call, *Times Higher Education Supplement*, No. 1020, 22 May 1986.

ROBERTS, D. & HIGGINS, T. (1992) *Higher Education: The student experience. The findings of a research programme into student decision-making and consumer satisfaction* (Leeds, Heist).

ROPER, E. (1992) Quality in Course Design: Empowering students through course structures and processes, paper to the AETT conference on 'Quality in Education', University of York, 6–8 April 1992.

ROTHBLATT, S. (1992) National students or local interests?, *Times Higher Education Supplement*, 7 Feb. 1992, p. 14.

RUDD, E. (1988) The evaluation of the quality of research, *Studies in Higher Education*, 13(1), pp. 45ff.

SALLIS, E. (1990) *The National Quality Survey*, Mendip Papers, MP009 (Blagdon, The Staff College).

SALLIS, E. & HINGLEY, P. (1991) *College Quality Assurance Systems*, Bristol, The Staff College, Mendip Papers, 20.

SCHERKENBACH, W. W. (1988) *The Deming Route To Quality and Productivity: Road maps and roadblocks* (Washington, DC, CEE Press).

SCHOOL OF INDEPENDENT STUDIES (1985) *Guide for Students Interested in Major or Minor Independent Studies* (Lancaster, University of Lancaster, School of Independent Studies).

SCHOOL OF INDEPENDENT STUDIES (1991) *Independent Studies Part 1: Tutors' and students' handbook* (Lancaster, University of Lancaster, School of Independent Studies).

SCHROCK, E. M. & LEFEVRE, H. L. (Eds) (1988) *The Good and Bad News About Quality* (Milwaukee, American Society for Quality Control, ASQC Quality Management Division).

SCHUDSON, M. (1984) *Advertising, the Uneasy Persuasion: Its dubious impact on American Society* (New York, Harper and Row).

SCHULLER, T. (Ed.) (1991) *The Future of Higher Education* (Milton Keynes, Open University Press/ SRHE).

SCOTT, P. (1987) The Mystery of Quality, *Times Higher Education Supplement*, 7 Jan. 1987.

SECRETARY OF STATE FOR EDUCATION (1988) Letter to the Chairman of the PCFC, 1 November 1988, London, DES, Circular.

SENSICLE, A. (1991) Quality assurance in higher education: the Hong Kong initiative, Presentation for the HKCAA International Conference, 15–17 July 1991.

SHORES, A. R. (1988) *Survival of the Fittest: Total Quality Control and management evolution* (Milwaukee, American Society for Quality Control).

SILVER, H. & SILVER, P. (1986) The Escaping Answer, in: C. C. MOODIE (Ed.) *Standards and Criteria in Higher Education*, pp. 157–170. (Guildford, SRHE & NFER/Nelson).

SILVERMAN, D. (1970) *The Theory of Organisations* (London, Heinemann).

SMYTH, D. J. (1991) A model of quality changes in higher education, *Journal of Economic Behaviour and Organisation*, 15(1), pp. 151–157.

STRATTON, A. D. (1988) *An Approach to Quality Improvement That Works: With an emphasis on the white-collar area* (Milwaukee, American Society for Quality Control).

STUDENT SATISFACTION RESEARCH UNIT (1991) *Report on the 1991 Student Satisfaction Research Unit Survey* (August) (2 vols inc. Appendices) (Birmingham, Birmingham Polytechnic).

TAGUCHI, G. (1986) *Introduction to Quality Engineering* (Tokyo, Asian Productivity Organisation).

TAYLOR, W. (1981) Quality Control? Analysis and Comment, *Educational Administration*, 9(2), pp. 1–20.

TRAINING AGENCY (1990) *Total Quality Management and BS5750: The links explained*, Discussion paper (Sheffield, Training Agency).

TRAINING, ENTERPRISE AND DEVELOPMENT GROUP (1990) *The Management of Quality: BS5750 and Beyond* (Sheffield, Training, Enterprise and Development Group).

UNIVERSITIES FUNDING COUNCIL (1991) *The 1992 Research Assessment Exercise*, Circular letter 22/91, 4 Oct. 1991.

VROEIJENSTIJN, A. I. (1991) External Quality Assessment: servant of two masters?, paper presented at a conference on quality assurance in higher education in Hong Kong on 15–17 July 1991.

WALSH, K. (1991) Quality and Public Services, *Public Administration*, 69(4), pp. 503–514.

WALSH, L. M., WURSTER, R. & KIMBER, R. J. (Eds) (1986) *Quality Management Handbook* (Milwaukee, American Society for Quality Control).

WARWICK, D. (1991) Teachers who need a good lecture, *The Guardian*, 15/10/91, p. 25.

WEBER, M. (1969) *The Methodology of the Social Sciences* (New York, Free Press).

WESTERGAARD, J. (1991) A Quality Watchdog for Higher Education?, Discussion paper from the Standing Conference of Arts and Social Sciences, SCASS.

WIGGINS, G. (1990) The truth may make you free but the test may keep you imprisoned: Towards assessment worthy of the liberal arts, in: AAHE ASSESSMENT FORUM, 1990b, *Assessment 1990: Understanding the Implications*, pp. 15–32. (Washington, DC, American Association for Higher Education, Assessment Forum Resource).

WILLIAMSON, J. (1986) *Decoding Advertisements* (London, Boyars).

WOOD-HARPER, A. T., ANTILL, L. & AVISON, D. E. (1985) *Information Systems Definition: The Multiview Approach* (Oxford, Blackwell).

YORKE, M. (1991) *Performance Indicators: Observations on their use in the assurance of course quality*, January, CNAA Project Report 30 (London, CNAA).