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An examination of the costs and benefits of the quality assurance mechanisms of Authorised Validating Agencies applicable to three key stakeholder groups: higher education institutions, Access Course providing institutions and students

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Submitted in fulfilment of a Ph.D within the Department of Continuing Education, City University, London

January 2000

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Abstract

An examination of the costs and benefits of the quality assurance mechanisms of Authorised Validating Agencies applicable to three key stakeholder groups: higher education institutions, Access Course providing institutions and students

This work outlines the history of Access Courses and explains the National quality assurance framework established to co-ordinate standards within such provision. The National Framework consists of a number of Authorised Validating Agencies (AVAs) who have been empowered to validate Access provision subject to various quality assurance mechanisms. The quality assurance requirements of AVAs are generalised and the effects they have, in terms of costs and benefits, to a number of stakeholders are detailed. Key stakeholders identified are the providing institution, students, and higher education institutions.

The general principles of cost-benefit analysis are outlined along with case study examples.

A computer-based model is produced with the capability of manipulating the generalisable cost-benefit factors to accommodate local conditions and could therefore be used as a decision support aid by the three key stakeholder groups. The application of the model beyond the case studies is also discussed.

The problematic nature of applying cost-benefit analysis to the quality assurance mechanisms of Access Courses is also considered.

Areas where further research is required are outlined.

Glossary of key terms

ACRG	Access Course Recognition Group
AE	Adult Education
AVA	Authorised Validating Agency
CNAA	Council for National Academic Awards
CVCP	Committee of Vice Chancellors and Principals
DES	Department of Education and Science
DSS	Decision Support System
DTI	Department of Trade and Industry
FE	Further Education
HAC	Hertfordshire Access Consortium
HE	Higher Education
HEI	Higher Education Institution
HEQC	Higher Education Quality Council
LEA	Local Education Authority
LOCF/N	London Open College Federation/Network
NOCN	National Open College Network
OCN	Open College Network
UCAS	Universities Central Admissions Service
W&NYAN	West and North Yorkshire Access Network

Introduction:

Access provision has grown from relatively small regional arrangements in the late 1970s to substantial national provision in the 1980s and 1990s. It has become the third recognised route into higher education (Secretary of State for Education *et al*, 1987: 9) - adequately preparing learners for university programmes (Osborne, 1988). As this provision has grown questions have been raised concerning its effectiveness and efficiency and the difficulties of measuring these factors (Davies, 1994). In addition attention has been focused on the suitability of the arrangements for assuring the quality of Access Course provision (Parry, 1995). This work is therefore timely in providing a cost-benefit analysis of the quality assurance mechanisms in Access Courses - concentrating primarily on Authorised Validating Agency (AVA) initiated quality assurance mechanisms. Of the many 'actors' or 'stakeholders' affected, in terms of costs and benefits, by the AVA quality assurance mechanisms the work focuses on three key groups: the Access Course providing institution (usually a further education college), higher education institutions, and students. The wide variety of tangible and intangible costs and benefits these 'actors' attract are compared and the difficulties of comparing quantitative and qualitative factors in a cost-benefit analysis are also discussed. A model is produced highlighting how some of the cost-benefit factors interact.

Chapters 1 to 3 provide a review of the literature covering: (1) the development of Access education and the National Framework for the recognition of Access Courses; (2) the rising importance of quality issues in manufacturing industry and more recently in the service industries such as health care and education; (3) the development of cost-benefit analysis as a tool for assessing, *inter alia*, the advantages and disadvantages of a given course of action made by a decision-maker, and the uses and limitations of modelling scenarios.

Chapter 4 details the methods and methodology used to carry out the project. It details the development of a cost-benefit model constructed along the lines of a decision support system (DSS) which has the capability of being manipulated, through changes in data entries, by the user.

Chapter 5 provides the findings of the research project. The results of applying the model to the four case study courses are presented. Difficulties of accommodating quantitative and qualitative data in a cost-benefit model are also discussed here.

In chapter 6 conclusions are drawn and the strengths and weaknesses of the methodology are discussed. Areas for future research are also identified here.

Chapter 1

1. Access education

'Access courses provide an alternative route into higher education for adults without traditional sixth form qualifications or vocational qualifications, allowing them to prepare for and gain entry to degrees and other higher education programmes...' (Higher Education Quality Council (HEQC), 1994: 96).

'Access Courses are targeted towards those groups traditionally under-represented in higher education; secondly, they are developed and delivered by a process of collaboration mainly between further and higher education sectors - a process which requires institutions rather than applicants to identify and remove barriers to entry; and thirdly, by offering a clear programme on to higher education courses, they provide not just a preparation but also a route into higher education.' (Woodrow, 1988: 320)

1.1 Background

What are now termed Access Courses had their origins in the adult education tradition of programmes designed for those with few acknowledged qualifications and with a structure and delivery less formal than traditional courses of study - allowing learners to study at their own pace and accommodate other commitments such as family responsibilities and work. The Russell Committee (Department of Education and Science, 1973: 47) commented that this type of provision was *'... not intended to cater for those who seek formal qualifications'* and was outside *'the main areas of technical, art and higher education'* but recommended, inter alia, that adult education of this type should provide the opportunity to study and gain a qualification.

Since the 1970s questions of access and participation for adults moved from the periphery to near the centre of national policy in education and training: *'... initiatives for Access had their origin in "high places": within and through the state, and formally at the instigation or request of the Department of Education and Science...'* (Parry, 1996: 10). The Department of Education

and Science (DES), in 1978, invited eight local education authorities to set up new preparatory courses for adults leading to higher education. These courses were designed to: *'bring up to a standard required for entry to courses of professional training and of higher education generally, potential students whose experience could be valuable in such careers but who lack the entry qualifications and have additional special needs which cannot be met by existing educational provision'* (Department of Education and Science, 1978). The initial aim was to enable more people from ethnic minorities to enter higher education in order to increase their numbers in professions such as teaching and community work with a high profile in the inner cities (Millins, 1984). However, the Department of Education and Science's attempt to cater for the specific problems faced by ethnic minorities in their "cultural acclimatisation" (Department of Education and Science, 1978) was: *'In practice generalised by practitioners, including tutors and course organisers, into a concern to widen access to higher education for various groups who had previously been largely excluded'* (Lieven, 1989: 161).

The increase in commitment to access has been attributed to the coming together of four wider and different forces:

1. a liberal commitment to providing equal opportunities;
2. the transferring of resources, and therefore power, to socially and economically disadvantaged groups;
3. a response by institutions to a predicted 33 per cent fall in the typical student intake (19 year olds) between 1984 and 1996; and
4. part of government strategy for retraining the adult population for new forms of work and entry into professions (Lieven, 1989: 162).

This policy thrust to increase participation in post-secondary and higher education led to a proliferation of programmes which *'emerged in a largely ad hoc manner, dependent on local and often fortuitous coincidences'* (Lieven, 1989: 161). However, two key features were often present in these programmes of study which were the fore-runners of the Access Course of today: a curriculum concerned with preparing the learner for higher education programmes (or other progression routes such as work); and a course or programme of study aimed at

'disadvantaged' learners. In addition other programmes of study, which were less formally academic in structure and content, emerged: what can be termed 'community education' courses aimed at enhancing the awareness/understanding among disadvantaged groups; and courses aimed at those returning to work (usually women returners) (Percy & Lucas, 1980; Percy, Powell, Flude & Langham, 1980).

Typically, the programmes above, which encouraged progression to higher education, were targeted at mature learners without traditional qualifications. However, many HE institutions were wary of admitting students without a formal education 'track record'. This was illustrated by studies showing the positive relationship between performance for traditionally qualified students and in examinations, typically A level, before entry (Sear, 1983; Smithers & Robinson, 1989). In addition, other studies have shown that mature or non-traditional students have a higher non-completion rate than younger students (Woodley, 1984). Other and subsequent research, concentrating on mature learners, revealed that they performed just as well, and in some cases better, than their 'traditional' counterparts (Bourner & Hamed, 1987; Yates & Davies, 1987; Smithers & Griffin, 1996; Molloy & Carroll, 1992). These studies assisted in establishing firm legitimacy and fostered a notion of right of access for non-traditional learners to higher education.

In light of the above legitimacy access to post-school education and training became increasingly focused on access to higher education (Tight, 1993). As a result the notion of access to education was reshaped and narrowed. Instead of providing a broad and mixed, in terms of content and delivery, range of learning opportunities it became merely another route to higher education (Edwards, 1997).

1.2 The National Framework

As Access Course provision grew questions were raised as to the suitability of the developing arrangements for recognition/validation and issues around quality and standards. In the mid 1980s the Lindop Committee (Department of Education and Science, 1985: 70) drew attention to what it deemed to be 'dangers', involved with the large numbers of mature and non-traditional entrants, and higher education institutions organising or assisting with the organisation of Access Courses linked to their own degree programmes. These links could help form "relationships and understandings" where rigorous selection at entry might be compromised and the Committee recommended that Access Courses should not be designed with a specific higher education course in mind, but should seek recognition from several institutions as an appropriate preparatory course for progression more widely. Although the report submitted by the Lindop Committee met with some criticism '*... [it] impugns the professional integrity of those involved [in Access]*' (Parry, 1986: 48), it focused attention on standards within Access Courses.

Within the next few years, there was a policy shift and as a reaction to the reducing number of 18 and 19 year olds Access Courses became more favourably viewed by policy-makers as providing some of the student numbers required to meet the anticipated growth in demand for qualified manpower. The 1987 White Paper began the first steps of co-ordinating the growing Access Course type provision by inviting validating bodies to develop a framework of recognition which would extend to access provision in all styles (Department of Education and Science, 1987).

After considerable debate the Department of Education and Science invited the Council for National Academic Awards (CNAA) and the Committee of Vice Chancellors and Principals of the Universities (CVCP) to establish the Access Course Recognition Group (ACRG) - a central body responsible for overseeing the co-ordination of standards in Access Courses across England, Wales and Northern Ireland. To differentiate between courses that facilitated access to education generally and specific Access programmes within the national framework, the title of the latter became known as an Access Course (with upper case letters) rather than an access course. Perhaps because the difference appears, *prima facie*, to be so subtle there is still some

confusion over the two types of provision - although Access Courses within the national framework are by far the most widely known programmes that facilitate access to higher education for those typically under-represented.

One of the great strengths of Access Courses was their ability to adapt to the needs of the local population who made up the majority of their learners and the resulting diversity remains a characteristic. However, as the national framework emerged it became necessary to set out minimum requirements for the programmes within it to allow comparability between courses and facilitate the notion that Access Courses should have a national 'currency' beyond local agreements. These requirements had to compliment the key principles of 'lightness of touch' on the part of the national body (the Access Course Recognition Group (ACRG)) and the diversity of approach to validation by the AVAs. Further to this and to ensure programmes were not diluted or devalued, minimum standards were chosen as a baseline for validation - such as the minimum of 500 study hours for the programme.

The basic principles of the arrangements set up in 1989 remain in place: a course recognised within the national framework achieves "kitemarked" status. A learner, having successfully completed a kitemarked programme, secures eligibility for entry into higher education. The Access Course Recognition Group (subsequently replaced by the Higher Education Quality Council's Access Courses Recognition Sub-group and, in August 1997, The Quality Assurance Agency for Higher Education) licensed organisations to approve Access Courses. Any educational organisation or consortium can apply for a licence - although certain conventions and guidelines must be observed as to their constitution and procedures. Normally, these 'authorised validating agencies' (AVAs) consist of consortia of local further and higher education institutions.

There are now 34 AVAs within the national framework (UCAS, 1999), with the majority in membership of the National Open College Network, or in transition to that status (Parry, 1996: 30). However, there is no single model dictating their construction, size or procedure. For example, London Open College Federation (LOCF) - a validating agency recognising many of the Access programmes in London - had 92 member organisations in 1994 (London Open

College Federation, 1994) and that number has continued to grow (over 100 in 1995); and Hertfordshire Access Consortium (HAC) had 8 (Hertfordshire Access Consortium, 1995) with some associate members. Despite the difference in size between AVAs, they are all empowered to use appropriate mechanisms and procedures to assure the quality of the programmes recognised by them.

AVAs are licensed by the Quality Assurance Agency for Higher Education, and were formerly licensed by HEQC's ACRG. This procedure is designed to ensure that the AVA has in place structures and procedures that will be effective in assuring quality of the Access programmes it validates.

1.3 AVA quality assurance for Access programmes

There are basically three key aspects to the quality assurance mechanisms operated internally by AVA's licensed within the national framework for the recognition of Access Courses:

1. the review and evaluation of AVA procedures;
2. validation and periodic review of courses; and
3. moderation and annual review of courses (Davies & Parry, 1993)

1.3.1 Review and evaluation of AVA procedures

Internal self-evaluation of AVA practices takes many forms - ranging from informal ad hoc feedback from local practitioners to the more formal evaluation reports from validation panels.

Davies & Parry (1993) identified 12 ways in which evaluation was conducted:

1. special review meetings of key committees
2. evaluation reports from course tutors on moderation and validation processes
3. evaluation reports from validation panels

4. annual reports on progress towards aims and objectives
5. reports to the academic boards of members institutions
6. reviews of documents, terms of reference, guidelines, checklists and standing orders
7. reviews of record keeping systems
8. reports on the implementation of criteria for validation and for the appointment of moderators
9. financial reports, budget forecasts and development plans
10. reports of issues arising from staff development events and practitioner forums
11. informal *ad hoc* feedback from local practitioners, providing colleges and receiving institutions
12. feedback from regional and national networks (Davies & Parry, 1993: 79).

The periodic review of the AVA by HEQC also prompts an internal periodic review that pulls together these routine procedures and often involves additional evaluative activities.

An example of the above aspects is validation panel evaluation reports, which provide feedback to the AVA on the perceived effectiveness of the panel process. The panel evaluation reports often take the form of short questionnaires distributed at the beginning of panel meetings and collected at the end. These 'evaluation sheets' are a mixture of short factual questions such as *'Did you receive adequate notice of the panel?'* - to questions requesting more qualitative responses such as comments on the chairing of the panel. These open-ended questions allow participants in the panel to feedback to the AVA their thoughts on the procedures and practices at the panel. They also focus on particular issues - such as ensuring a representative spread of subject interest, with questions such as: *'Do you think the recognition panel examined all relevant aspects of the courses under consideration'.*

1.3.2 Validation/periodic review and moderation of courses

It is generally the case that the validation/recognition¹ of Access Courses by AVAs are conducted by panels. Normally the panel process of most AVAs follows the three stages below:

1. Development
2. Panel process
3. Post-panel

At the development stage the course tutor of the providing institution sends a draft submission of the course to the AVA where the document is commented upon by a Development Officer and is returned to the tutor with recommendations and advice. The tutor may make amendments, and then sends the final document to the AVA. Upon receipt of the document, the AVA checks that the document meets the requirements of submission specifications and is ready for a panel. If it is the AVA then sets a date when the course will be considered by the panel for recognition as an Access Course within the national framework and thereby achieve kitemark status.

The panel process begins when the AVA informs the providing course institution of the date of the panel and asks for a number of copies of the document to distribute to panel members invited to the panel. Panels are usually made up of:

A chairperson

Normally associated to the AVA, an employee of it or a member of its quality committee(s)

A scribe/secretary

To note the proceedings and provide an accurate record of the panel

The course proposers

1 or more representatives from the providing institutions

¹ These terms are used interchangeably by AVAs to describe the procedures taken in order that an Access Course may be included within the National Framework of Recognised Access Courses.

Adult Education/Further Education & Higher Education representatives

Teaching staff who are knowledgeable in the subject areas of the course under consideration and are independent of the course providing institution (usually, there is a requirement for at least one higher education and one further education representative to be present)

Independents

Those who are knowledgeable in the relevant subject areas - for example representatives from business, training organisations etc.

At the panel the course team presents a brief overview of the course to the panel, in line with the content of the submission document. Generally, depending on the size of the programme, the panel then discusses the overall content of the document before splitting into small subject-specialist pairs or groups to analyse various options and modules offered. After considering the programme as a whole the panel either recognises the course unconditionally (which is quite rare), recognises the course subject to some conditions (minor amendments/changes that must be made before the programme can be fully recognised), defers recognition of the course (where more significant amendments are required), or rejects the course. Rejection rarely occurs since programmes totally unsuitable for approval are generally filtered out by the development process. The panel may also make recommendations which although not binding should at least be factored when the programme comes up for review/revalidation and may be addressed by the moderator.

Following the panel the tutor completes the required work, usually with guidance from the AVA involved in recognition, and sends a revised/amended submission document to the AVA. The AVA then submits the programme to the appropriate quality committee which checks that the panel has been properly conducted and that any conditions set by the panel have been met. It then formally validates the programme and informs the providing institution. The AVA then informs HEQC which formally kitemarks the programme and then enters it on the Register of Recognised Access Courses. This allows the course to attract funding from the Further Education Funding Council (FEFC) via Schedule 2c, which outlines the various course types eligible for FEFC funding.

Having recognised the course the AVA oversees various post-panel quality assurance activities. These include the moderation and review of the programme. In most cases moderators are put forward at the panel meeting stage of the programme's development and they are often present at the panel meeting itself. They assess the quality of the learning experience for the students, the integration and coherence of the curriculum and crucially confirm the standards of achievement (in Open College terms the level and number of credits awarded). In the past the majority of moderators were drawn from suitably experienced staff in higher education - although increasingly they come from further education institutions. In small programmes there is normally 1 moderator for the entire programme but in large wide-ranging multi-modular courses it is common to have several, for example 1 for art-related subjects, 1 for business related subjects and so on. There are exceptions to this general rule such as Hertfordshire Access Consortium where 2 moderators are appointed for each course - 1 from higher education and 1 from further education.

When moderators have been appointed to programmes they make visits to the providing institution (often 1 per term), observe the course in operation, examine students' work, discuss course delivery and content, and produce an annual report for the AVA/providing institution. Included in the report are feedback on: whether conditions of the original approval are being met and what action has been taken on any recommendations, whether the programme is operating as presented at panel and comments on any changes, and a recommendation to the AVA concerning the award of credit (if relevant) and the kitemarked Access certificate to students. If a moderator highlights an area of concern in his/her report and subsequent action taken by the providing institution on this concern is unsatisfactory then the AVA can withdraw recognition of that programme. This is very rare with problems normally being resolved by liaison between the AVA and the providing institution.

In addition to the moderation of programmes there are also periodic reviews, normally every 3 or 5 years (although some courses may have a shorter "probationary" period of 1 year before their first review). The procedures adopted at such reviews are generally conducted by panels and follow similar procedures as the original validation/recognition of programmes. Figure 1:1

shows the quality assurance cycle for Access programmes generally adopted, with local variations by AVAs.

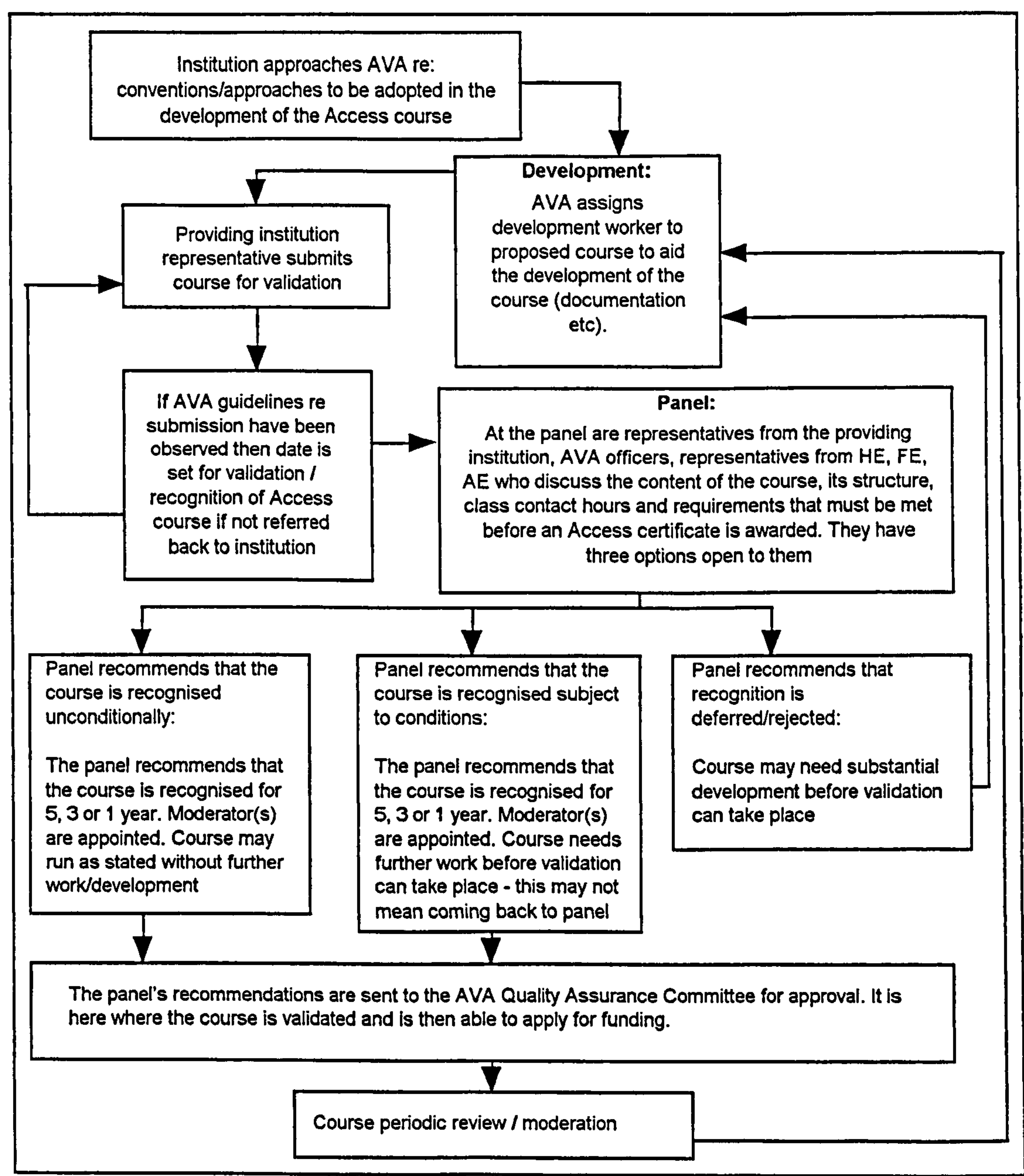


Figure 1:1 Quality Assurance cycle for Access Courses

The development of the National Framework for Access Courses has enabled them to become a secure route for non-traditional students to higher education. However, some argue that their origins were to promote learning for the typically disadvantaged and promote equal opportunities and access to education for all (Benn & Burton 1994). There may have been an inevitable trade-off agreed by those attempting to promote Access as a viable route to higher education and those charged with recognising it as such at a national level. These actions may have facilitated the creation of the 'bounded field of adult education' (Edwards, 1997: 67) where the creative and radical movement of access to education has been tempered by a standardized solution to the problem of progression to higher education (Tight, 1996). As a result, Access Certificates may be increasingly seen as traditional qualifications. The implication of this could be that Access Courses become effectively the same provision they were set up to counteract. An acceptance of Access Courses on these terms may result in a reduction in accessibility and participation as HE institutions readily accept it as the *sole* means for admitting otherwise unqualified adults (Wright, 1991).

However, in an age of life-long learning, where provision is changing to support access and participation, open and distance learning and the assessment and accreditation of outcomes in an ever-increasing number of learning settings, access may regain its wider definition. Recent criticisms of Access Courses (Tight, 1993), the development of accreditation and modularisation schemes and the publication of consultation documents such as The Government's 'Learning Age' (Department for Education and Employment, 1998), have all factored in the promotion of wider access to education in all its stages of provision.

Chapter 2, a review of the literature on quality issues, provides a history of the concept or notion of quality in both industry and education, including a discussion of the different models of quality control and quality assurance that operate in industrial and educational settings. It also discusses the implications of, in terms of quality, the many different methods of assessment and accreditation of learning.

Chapter 2

2. Quality

This chapter details the developments in concepts of quality in industry and education. Quality in the industrial setting is discussed first as it shows the emergence of key concepts in the subject. This facilitates the discussion of quality in education - where many of the industrial setting concepts are used and developed.

2.1 Quality in industry

2.1.1 Quality control

Major interests in quality developed with the advent of industrialisation (Sallis, 1993: 14) as the breakdown of work due to the expansion of mass production meant that the employee was increasingly separated from the end product and responsibility for checking quality was removed. The concept of separating employees and dividing work into small components was developed by the work of Frederick W Taylor and in the subsequent publication of his land-mark text *'Principles of Scientific Management'* in 1911 (Taylor, 1947). Advocates of this 'scientific' (as it became known) approach to management emerged during the 1930s and 1940s, reducing the workforce to the human components of the process of manufacture. Systems of inspection of products, at or near the end of manufacturing process, were developed as part of this approach to ensure goods were of a certain quality - this became known as quality control. If goods did not achieve a certain pre-set quality threshold then they were rejected - thus preventing unmerchantable goods from ever reaching the customer.

Although quality control had its strengths there were major weaknesses. In particular, it was a *post facto* activity or process (Oakland, 1989), which often resulted in huge amounts of rejected goods generating expense in terms of scrap and reworking. However, this did not prevent the system remaining dominant, particularly in manufacturing, for the great part of the 1940s and 1950s.

Throughout the 1960s and early part of the 1970s attention on quality was diluted somewhat. In the seller's market that existed at the time buyers were only too happy to pay the lowest price for a product at the cost of quality. However, during this period the effectiveness of a quality control/scientific method to management began to be questioned. For example, the work of Trist (1963) compared, in the mining industry, the 'conventional' approach to management, which separated and divided functions, such as quality control, and a 'composite' approach where teams of miners were formed and given responsibility for the total task of coal extraction: membership of the teams, responsibilities of members, distribution of wages and quality control measures were all managed by the group themselves. Major differences in productivity, attitude and quality between the two types of organisation were identified.

The composite work group was highly organised and stable. It was no longer unrealistic for individuals to attain stations of increased importance within the group. The concept of being asked to perform more than a simple task was no longer regarded as exploitation. The opportunity to learn additional skills was actively sought. Supervisors of the groups migrated from issuing orders to simply providing technical advice. They became "leaders" instead of "bosses" they became good guys. (Reilly, 1994: 5)

Despite such research findings, the move away from the scientific approach did not happen on a large scale until the late 1970s/early 1980s (Deming, 1986; Oakland, 1989).

2.1.2 Quality assurance

During the 1970s and 1980s quality began to have a more central focus. The reason was two-fold: (i) the lowering of trade barriers allowed quality-conscious countries such as Japan to expand into different markets and increase their market share; and (ii) a more sophisticated customer-supplier relationship developed whereby the customer began to dominate the relationship, and, through an increasingly diverse (in terms of range and quality) product range, customer choice became a major factor. As a result of the development of a buyer's market manufacturers increasingly realised that quality was the key to competitive advantage (Sallis,

1993: 18). During the latter part of the 1980s and early 1990s the focus on quality became greater than ever before. Quality assurance processes based on such concepts and procedures as those reported by Trist – giving the worker the responsibility for quality, self-managed teams, quality circles, empowering employees – replaced old quality control mechanisms. Quality control systems, comparing output with defined standards gave way to quality assurance arrangements seeking to achieve the same objectives but in a preventative rather than a post facto way (Cuttance, 1994). However, organisations began to realise that although quality assurance procedures were a vast improvement on quality control in reducing cost and wastage, they did not in themselves encourage a continual improvement approach to quality; they merely ensured that procedures were in place (Dale, Lascelles, & Plunkett, 1990).

Increasing attention to quality led to an explosion of material on the subject, the rise in prominence of the quality 'gurus' (Department of Trade and Industry, 1991) and the emergence of the concept of total quality.

2.1.3 The quality 'gurus'

Many management theorists have written on the subject of quality; Deming, Crosby, Feigenbaum and Juran are four who have developed theories or concepts that have been applied or developed in educational contexts.

Deming

A major theme running through the work of the 'quality gurus' is that quality can be used to gain competitive advantage. Deming (1986) argued just that, claiming quality improves productivity and competitive position, whilst Crosby (1979) touched upon another central theme by arguing that increased profitability can be gained from quality improvement programmes. He, like Deming, issued a 14-step programme to change an organisation into one with a quality improvement focus.

In seminars held throughout the 1980s Deming put forward '14 Points for Management' to summarise his philosophy for improving quality, they included:

1. responsibility for quality management and improvement falls to all employees;
2. there must be a new philosophy of quality, led by managers;
3. quality should be 'built into the product' rather than relying on inspection;
4. price will become less important in determining suppliers;
5. there must be a process of continual improvement;
6. training must take place on the job;
7. the focus of management must be on facilitation to improve;
8. fear should be removed from work;
9. inter-departmental barriers should be broken down;
10. slogans should be eliminated;
11. numerical targets should be removed;
12. every job should be developed to be rewarding and challenging;
13. self-education and improvement should be instituted;
14. everyone must work to accomplish this transition. (Deming, 1986)

Deming emphasised that his 14 points must be related to the requirements of individual companies. His work has constantly evolved and more recently can perhaps best be described as management by positive co-operation (Department of Trade and Industry, 1991).

Juran

Joseph M. Juran rose to international eminence in the 1950s following publication of his '*Quality Control Handbook*' (Juran, 1951). Interestingly he defined quality as 'fitness for use'; and central to his approach was the principal that quality does not happen by accident, it must be planned. He developed the idea of a quality trilogy: *quality planning* which exists to attack sporadic quality problems, *quality control* to attack chronic problems and *quality improvement* to develop and refine policies. His 'Quality Planning Road Map' consisted of the following steps:

1. identification of the customers;
2. determination of the needs of those customers;
3. translation of these needs into a 'quality' language;
4. development of a product to respond to these needs;
5. optimisation of product features to meet customers' needs;
6. development of a process with the ability to produce the product;
7. optimisation of the process;
8. proof of the process' capabilities under operating conditions;
9. transfer of the process to operations.

Juran emphasised the cost of quality and recommended its measurement to highlight quality improvement opportunities, warning that there are no shortcuts to quality and recommending that the quality improvement process should start with top management.

Feigenbaum

Dr Armand Feigenbaum has been recognised by fellow management theorists as the originator of 'Total Quality Control' - a systematic or *total* approach to quality, requiring the involvement of all functions in the quality process, not just manufacturing. He advocated building quality into the system as opposed to inspecting and controlling quality 'after the event'. Feigenbaum shaped the definition of a Total Quality System as an operating work structure which spanned an organisation and set out agreed procedures for guiding the actions of the people, the machines and the information of the organisation in the most effective way to assure customer quality (Department of Trade and Industry, 1991).

Thus Feigenbaum developed quality as a way of doing business; with three keys to achieving quality competitive leadership:

1. a clear understanding of international markets and how people buy in these markets;
2. a thorough grasp of a total quality strategy, which should provide a business foundation and capacity to satisfy these customers;

3. practical management knowledge to create the company environment for quality and for establishing the goals required for quality leadership.

Feigenbaum argued Total Quality Systems are the most powerful change-agent for companies and that managers must lead them so they develop the growth of companies.

Crosby

Philip Crosby is best known for his text 'Quality is Free' (Crosby, 1979) in which he put forward 'Four Absolutes of quality management':

1. quality is defined as conformance to requirements, not as 'goodness' or 'elegance';
2. the system for causing quality is prevention, not appraisal;
3. the performance standard is Zero Defects;
4. the measurement of quality is in the Price of Non-Conformance.

Quality defined as conformance to requirements is a crucial concept to understand. Suppose a computer is needed for an office. Which offers better 'quality', a large Pentium-based machine or a standard portable 486? The answer depends upon the buyer's requirements. If the machine is required to analyse vast amounts of data quickly, clearly the Pentium is the better 'quality'. If, however, the machine is merely required as a word processor and space within the office is limited, then the portable 486 will be better 'quality'. Therefore conformance to requirements is more specific than the general 'fitness for purpose' espoused by Juran.

'Prevention not appraisal' implies one of Crosby's catchphrases, 'Right First Time'. This is achieved through building quality into the product. Factors necessary to achieve this are an increase in the awareness of quality in the organisation, rigorous training and the establishment of improvement goals.

The third absolute, Zero Defects, focuses efforts towards continuous improvement. An effective Zero Defects approach means that when mistakes occur, someone will ask 'how did it happen?', 'why did it happen?' and 'what can I do to prevent it happening again?'

The Price of Non-conformance is the cost that results from a product not being the required standard. A simple example would be the costs involved with replacing a faulty television. Quite often these 'costs' would go beyond the financial cost of physically replacing the television - they may also include the 'cost' of a lowering of the public image of the producing organisation.

Many contemporary views of quality management are developed from the work of the gurus. Deming believes quality can improve competitive position and productivity. Like Juran, he emphasises the need to build quality into products by involving all departments in the design and conception of a product. Juran, Feigenbaum and Crosby emphasise quality as satisfying customer requirements. All speak of identifying internal and external customers. Crosby espouses the theme of continual improvement. Feigenbaum argues for the use of a documented system. Like Deming, Feigenbaum believes Total Quality Management can lead to competitive advantage. Deming and Juran say the process should be led by top management.

There are differences in some of the views of these gurus. For example, Deming calls for the elimination of slogans and numerical targets and advocates quality measurement by conformance to requirements. Crosby's slogans include 'right first time', and he believes quality should be measured in terms of the cost of non-conformance. However, although many of the gurus put forward different solutions to the problems of quality management the basic principles they employed remain the same (Oakland, 1989).

2.1.4 Summary

In summary, the focus on quality in industry can be ascribed to 6 key reasons:

1. organisations become aware that complying with the requirements of a particular quality system is not necessarily a sure-fire guarantee against producing and shipping non-conforming products to the customer ... ;
2. the imposition of stringent quality requirements by major customers;

3. the teachings of quality gurus such as Crosby (1979), Deming (1982), Feigenbaum (1983), Ishikawa (1985), Juran (1988);
4. loss of market share;
5. increased contact with personnel from Japanese companies with manufacturing facilities in the West; and
6. published case studies, which focus on how companies have been successful by focusing on quality (Dale, Lascelles & Plunkett, 1990).

2.2 Quality in education

2.2.1 Quality in public service provision and the marketisation of education

Until relatively recently, public services have been unaffected by quality issues. However, as a result of increased competition initiated by deregulation, quality has become a tool or indicator with which to judge this type of service provider. The development, in the UK, of initiatives such as the Citizens Charters have led to providers being forced to indicate their performance against set criteria. Failure to meet such standards has resulted in a variety of measures being available to the courts and others charged with regulating the public services. These include the imposition of fines and in some cases the revocation of operating licenses. This increase in direct accountability of the services they provide has subsequently led to a more focused appreciation of quality and standards issues in public service.

The work of the quality gurus discussed earlier in this chapter and the *'conflicts created by expansion and the pursuit of efficiency gains'* (Holloway, 1994: 118) have, at least, influenced the interest around quality issues in education. A key factor forcing an appreciation of quality issues has been the marketisation of education. As government funding for education programmes has decreased, institutions have sought other sources of income for their educational provision. As a result, training and education has become increasingly market-orientated and driven (Freeman, 1993). Essentially there are three issues dominating the focus on quality in education in the UK: the large amount spent by government on education; the loss of trust by government in educational institutions producing a community with the knowledge, skills and capabilities to compete successfully in a world economy; and the message put forward by the industrial gurus, such as Deming, that quality leads to competitive advantage and survival (Doherty, 1994a: 247). By focusing on the economies and efficiencies that quality systems bring, education has moved from a public service model towards a greater market orientation (Ball, 1990; Bowe & Ball, 1992; Murgatroyd & Morgan, 1993; Barnett, 1992). Increasingly, educational organisations have been forced to consider 'private sector' issues such as mission, market strategy, client/customer satisfaction and quality (Holloway, 1994).

Education is becoming like any other market, with providers attempting to distinguish their provision from that of their competitors. One way of doing this is through providing specialist courses or facilities although, drawing on the experience of other industries, the most popular competitive tool is that of quality.

Recently, the approach adopted by manufacturing industry has been that of *assuring* quality, as highlighted by the writings of the quality gurus. An *assurance* model appears to be the one that has found the most credence with educational organisations (Freeman, 1993: 10). It has been described as an embracing concept which affects the ethos and operation of post-compulsory education (Elliott, 1993).

Elliott adds that '*a key determining characteristic of quality assurance systems in education has been recognised ... to be the clear preference expressed for quality systems imported from industry*' (Elliott, 1996: 70). This is reflected in FE research (Further Education Unit, 1991: 3). In addition, changes in funding arrangements in further and higher education have also assisted in the development of a system of accountability which allows those responsible for funding to assure themselves that the result of their funding is a service which is efficient and effective (Bell, 1992: 134; Bradley, 1996). Others have suggested that a well-developed approach to quality assurance provides a common focus of accountability and development for a service. Accountability systems focus primarily on *proving* quality while development systems focus on *improving* quality (Cuttance, 1994).

Some authors have adapted the quality assurance approaches used in industrial settings and applied them to Access provision in order to position responsibility for quality assurance as closely as possible to the interaction between the learner and the curriculum (Wilson, 1991).

As mentioned in Chapter 1, the national arrangements for the recognition of Access Courses had within its framework a focus on quality assurance. It was designed to, inter alia, encourage staff in HE to admit Access Course students and also to promote confidence in the students themselves in obtaining a place (CVCP & CNAA, 1989). A further factor to be considered in the rise of importance of quality in education are the recent Charters introduced by the Government

highlighting citizens and students rights from service organisations such as schools, colleges, and universities (Harvey & Green, 1992: 23). As in industry, the interest in quality in education has led to an explosion of 'How to' publications covering such topics as performance indicators, quality assurance systems, quality audits, quality manuals, and ways of ensuring quality in relation to specific aspects of teaching and learning (Bell, 1992: 132).

2.2.2 Stakeholders in quality

An attitude which embraces industrial quality concepts (many of which were developed outside of the UK) has been questioned as *'inappropriate for British industry let alone British schools'* (West-Burnham, 1992: 14). These concerns were reflected (for FE) by the FEFC:

'The education service can learn from the approaches to quality and its assurance adopted in the business and industry sectors. However, the different aims and objectives of a public service, which take account of the needs of the community as a whole as well as those of individual consumers, must be reflected in its quality assurance arrangements.' (Further Education Funding Council, 1993: 7)

In addition to quality being associated with the process of education, it is also multi-dimensional with *'many actors and stakeholders ... involved (... educational institutions ..., managers, teachers and researchers, support staff, students, government agencies, employers, academic and professional organisations)'* (Westerheijden, Brennen & Maassen, 1994: 17); and it has many focal points such as good quality buildings, effective lectures, excellent resources, good community links, high exam pass rates (Sallis, 1993: 12).

The above suggests that a complex interaction takes place where each input may be ascribed different degrees of importance by different stakeholders - for example, how the dimension of teaching accommodation is viewed by the various stakeholders (as shown in Figure 2:1 overleaf).

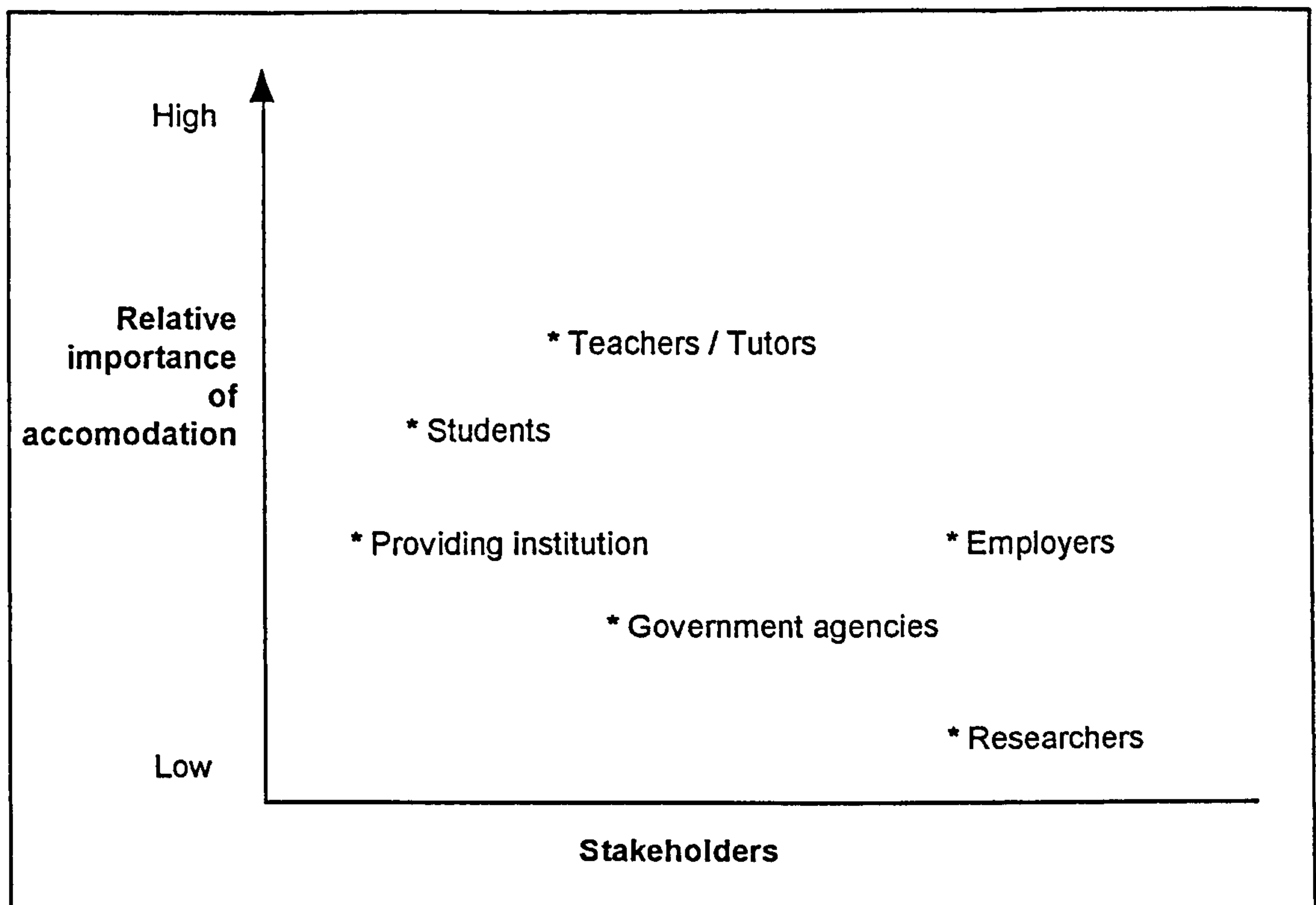


Figure 2:1 Stakeholder views on the quality of teaching accommodation

We might speculate, as indicated in Figure 2:1, that those who view the quality of teaching accommodation to be most important are the teachers/tutors themselves. This is understandable - as they may correlate good quality accommodation with effective teaching and learning (Ashworth & Harvey, 1994). In the example, researchers do not see teaching accommodation as important because they do not use it for their work. If the dimension under consideration were laboratory space then its quality would be of more importance to researchers as it would be a resource more heavily used by them. This shows that the level of quality in a service (education) is viewed uniquely by the many different actors involved - who may be those providing the service (the teachers/tutors), those receiving the service (students), and those working with the product or *ultimately* receiving the service/the product of the service (e.g. employers) (Pollit, 1992). The situation is further complicated because *'there are (at least) as many definitions of quality in higher education as there are categories of stakeholders ... times the number of purposes, or dimensions, these stakeholders distinguish'* (Brennan et al, 1992: 13).

2.2.3 Definitions of quality

Quality has generally been accepted as important in education, although it has been a difficult concept to define, not least because of the different views of each of its stakeholders. Harvey & Green (1993) recognised this and developed five main definitions of quality in education:

1. quality as exceptional;
2. quality as perfection or consistency;
3. quality as fitness for purpose;
4. quality as value for money;
5. quality as transformation.

The first four definitions are common quality definitions in industry but the fifth seems unique to education - it refers to the actual process of education itself: *'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'* (Harvey & Green, 1993: 24). However, this implies a passive role for the consumer/student. Education is a two-way/collaborative process and any transformation is achieved by the students themselves interacting with the educational process. Therefore quality as transformation has, in common with the other definitions of quality in education, various influences.

Others have categorised quality in a number of ways in order to overcome the problem of competing views on its definition. For example, quality as quality assurance, contract conformance and customer-driven quality (Murgatroyd & Morgan, 1993).

Quality as quality assurance focuses on the *'determination of standards, appropriate methods and quality requirements by an expert body, accompanied by a process of inspection or evaluation that examines the extent to which practice meets these standards'* (Murgatroyd & Morgan, 1993: 45).

Contract conformance acknowledges that some quality standard has been specified during the negotiation of forming a contract. For example, when providing an IT course of study an institution may specify the number of contact hours between the learner and lecturer and the computing facilities that will be available for their sole use.

Customer-driven quality is often associated with the customer's perceptions of whether or not the product or service meets their expectations and is 'fit for its purpose'.

Murgatroyd & Morgan (1993) regard customer-driven quality and its association with the notion of fitness for purpose to be at the heart of the quality revolution.

A 'spectrum' of quality definitions which embraces those put forward above has been developed to inform the continuing debate on quality (see Figure 2:2 below).

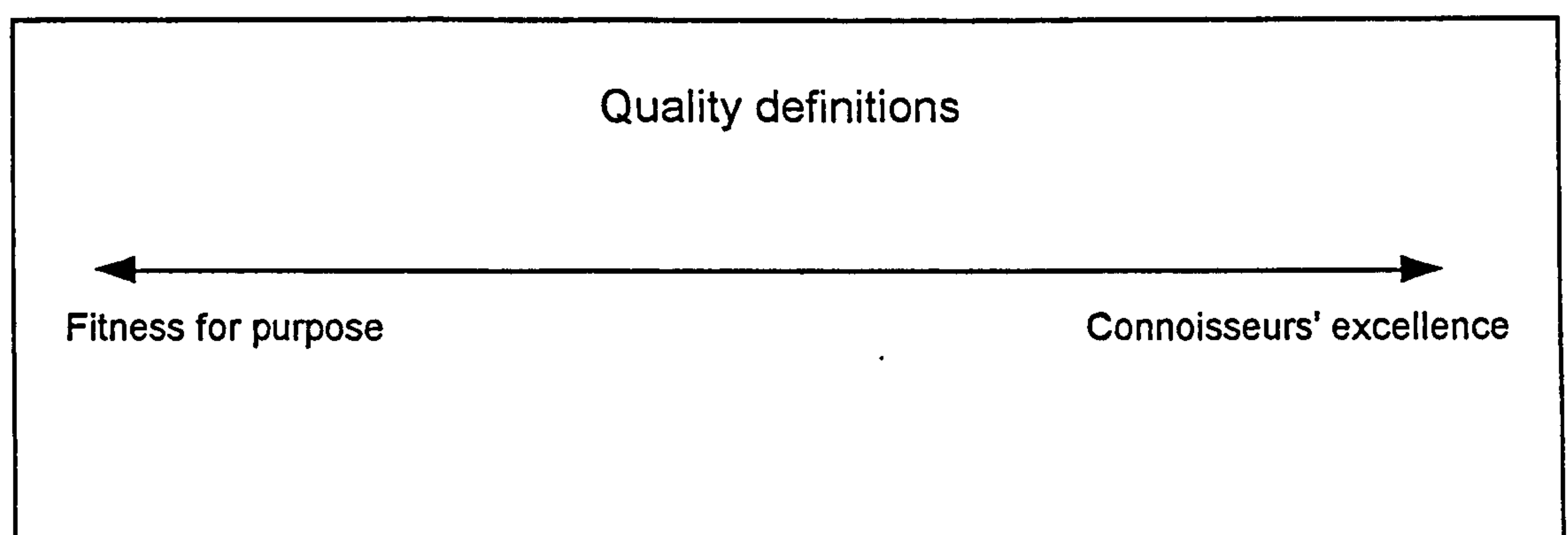


Figure 2:2 Spectrum of quality definitions (Middlehurst, 1997)

At one end of this spectrum is the notion of quality as fitness for purpose as developed by Juran - where purpose is defined in terms of customer requirements. At the other end, quality is defined as a level of excellence by those who are expected to understand and recognise such excellence, the 'connoisseurs' (Middlehurst, 1997: 46). The exact location on the spectrum of a definition of quality will depend upon the 'stakeholder' concerned (who could be a provider or

customer/student, for example), and the standards by which they are assessing or judging quality. For example, a fitness for purpose definition would apply to student assessment of teaching quality set against the standards set by the subject provider.

A 'connoisseurs' definition would apply where judgements of academic standards, as compared to other institutions, are being made by external examiners.

Recently, there has been some movement away from notions of quality that typically would fall nearer to the connoisseur's end of the spectrum. Generally, quality as excellence in education has been replaced by quality as fitness for purpose (Green, 1994). However, the question of 'whose fitness for purpose?' still presents itself. If the student is the key 'stakeholder' or customer further complications arise in defining and assessing quality. For example, as highlighted earlier, the learner and the provider (student and lecturer) are both involved in the production process - this has no parallel in manufacturing industry from where many quality techniques are derived. In addition, some writers state that the student is not *'best placed to determine what quality is and whether it is present'* (Green, 1994: 171; Roberts & Higgins, 1992). An alternative method can be achieved by replacing the student 'stakeholder' with the providing institution and defining fitness for purpose as the institution fulfilling its own stated objectives or mission.

2.2.4 Effectiveness of quality systems

Because of the multi-dimensional nature of quality in education, analysis and measurement procedures which reflect this are important. As Sallis (1993) points out, the quality mechanisms of British education have usually been external to institutions, and whilst inspection, examination and validating bodies will continue to be important in maintaining quality standards, institutions are increasingly being required to develop their own quality systems, and to be able to demonstrate publicly that they can deliver a quality service (Sallis, 1993: 13). The approach taken to quality and standards in Access has been the 'internal' or 'peer group' process developed from the Council for National Academic Awards (CNAA) method with the ownership

of quality remaining close to the point of delivery. As a result this approach assures quality rather than controlling it and functions along similar lines to quality circles (its industrial setting counterpart). A peer group process compliments the original intentions of the ACRG by accommodating the diversity in approach to validation whilst still maintaining a 'lightness of touch'. If this shift of 'control' for quality continues to flow from external bodies to closer to the point of delivery it would be reasonable for the accountability associated with that external control to also shift. The greater autonomy provided by the internal control of quality, as well as the reduction in restrictions on resource deployment/allocation will allow educational institutions to become more competitive by providing a wider variety of courses and being flexible in their location and method of provision. A competitive edge will be important in an unfolding age of uncertainty where schools are increasingly encouraged to offer vocational qualifications, employers are developing National Vocational Qualification programmes, and degree programmes are being franchised to further education colleges. With the traditional providers of education being challenged there is now a need, greater than ever, to focus on the needs of the customer/consumer of education - and at the heart of this focus is quality (Sallis, 1993: 20).

2.2.5 Total Quality Management

Moves made by educational organisations to develop their own philosophy and methods towards providing a quality service are characteristic of a total quality management approach (Hall, 1996). Total Quality Management or TQM, like the concept of quality itself, is interpreted differently by different people. However, there is common agreement that it is total in the sense that everyone in an organisation is crucial in the production of the service to the customer. This concept of 'total' acknowledges that the organisation operates in an environment upon which it has a role and impact (Earnshaw, 1996) and is therefore responsive to customer needs.

Although TQM is a move away from the typical standards approach to quality in education, the two need not necessarily be mutually exclusive. A standards approach, such as British Standard 5750 can be a useful intermediary towards the achievement of TQM. In addition, the TQM approach, unlike externally imposed standards, is seen as a more acceptable approach

and is in accord with traditional education values (Doherty, 1994b). Moreover, its promotion of internal quality arrangements may lead to FE institutions seeking to validate their own programmes (along similar lines to HE organisations). This may have implications for Access Course validation where the majority of the assuring activities/processes could be increasingly carried out within and by the providing institution - leaving the AVA with a minimal 'overseeing' or 'checking' function. A development of this kind would echo the original 'lightness of touch' principle devised at the inception of the national framework for the recognition of Access Courses.

Despite their general effectiveness (Parry, 1995), questions are now being raised as to the efficiency of the mechanisms used to assure quality in Access. At the institutional level there are concerns about the resourcing of the activities of peer group quality assurance models (Barnett, 1994). This has led to questions focusing on issues such as: *'what are the costs and benefits, and to whom?'* Chapter 3 reviews the literature on cost-benefit analysis, a tool that is increasingly being used to assess the effectiveness and efficiency of a given course of action, and outlines mechanisms used for assessing the costs and benefits of specific courses of action. This powerful evaluative tool has been used for many years by policymakers and is being increasingly used to determine the effectiveness and efficiency of differing courses of decisions made. The rationale for its varied application and setting are also outlined in the following chapter.

Chapter 3

3. Economic analysis in education

The previous chapter examined the importance of quality in industry and education. Increasingly attention has been focused on the costs incurred by the systems and processes that examine the quality of a product or service. Many argue that the cost of producing a good quality product or service will be less than the costs incurred by poor quality provision (Crosby, 1979; Oakland, 1989; Reilly, 1994). Reasons for this include bad quality leading to dissatisfied customers and repair costs for faulty goods. Recognising this, the concept of TQM (explained in the previous chapter) dictates a dedication to quality issues within an organisation.

Analysing the quality of education from this financial or economic perspective has been viewed as inappropriate by some educationalists. Some argue that measurement of quantity in relation to quality in education is difficult to measure as the most important objectives in terms of education are in fact beyond measurement. Also, the economic analysis of educational choice and efficiency is overwhelming when adequate study may reveal more effective and efficient ways of deploying resources:

'What virtue can there be in wasting resources on an inefficient way of achieving given ends if those same ends can be achieved more cheaply, thereby releasing resources to achieve some other educational goal which otherwise would have to be ignored for absence of resources?' (Thomas & Simkins, 1987: 13).

As a result of, *inter alia*, the scarcity of resources to fund education programmes questions are being raised which ask whether a particular activity, and we may include a quality assurance activity, is an effective and efficient use of resources. With this focus on appropriate use of resources it has recently been suggested that the national agency which co-ordinates the recognition of Access Courses (formerly HEQC), probably adds little additional benefit than that already provided by the local AVA which recognises the Access Course (Wagner, 1997). These comments are typical of those in education who are concerned that resources are deployed in a rational and productive way. Drawing on analytical and decision tools used in industry, some

educationalists are turning to such techniques as cost-benefit analysis and cost-effectiveness analysis to examine the effectiveness and efficiency of resource deployment decisions (Dunn & Sullins, 1992). This chapter reviews the literature on cost-benefit analysis and considers its applicability in educational settings.

3.1 Definitions of cost-benefit analysis

There are many definitions of cost-benefit analysis and although the terms used may differ and the scope of the analysis may vary, the essential feature remains constant: a calculation of resourcing needs for a project/activity compared with the value of the goods or services to be produced (Peters, 1973; Ashworth & Harvey, 1994: 5). Put simply, it is a system: '*developed by economists for weighing the "pros" against the "cons" of decisions*' (Mace, 1986: 18). Additionally, cost-benefit studies should consider repercussions of the activity in the distant as well as nearer, future (Prest & Turvey, 1965). However, this appears, *prima facie*, to narrowly define a cost-benefit study and was criticised nearly 50 years ago (Pigou, 1950) on the grounds that in a capitalist society, individual entrepreneurs focused on private or individual rates of return. Hence economists and decision-makers now tend to view cost-benefit analysis as embracing the identification and financial assessment of the *total* costs and benefits of an activity, paying particular attention to the *social* costs and benefits which do not normally feature in a conventional costing exercise (Armstrong, 1993: 364). This is especially so in analyses which focus on educational programmes where efforts are made to establish as many cost and benefit factors as possible. However many analyses are, because of measurement difficulties, often restricted or limited by the 'decision maker' to a primary focus on *direct* and easily defined costs and benefits (Royle & Shaw, 1988: 239). That is not to say, though, that other costs and benefits are not factored in the analysis. The analysis should attempt to capture all relevant costs and benefits and if difficulty is encountered in estimating their worth they should be at least noted so that the reader can estimate their value (Phelps, 1996: 2).

The major work in cost-benefit studies began in the USA and examined the development of major river valleys (Howe, 1971). Landmark studies conducted in the UK included that of the

Victoria Line extension to the London Underground (Foster & Beesley 1963) and the appraisal of the economics of the M1 motorway (Coburn, Beesley & Reynolds 1960). More recent studies (detailed later in this chapter) include an analysis of different water system planning techniques (Howe, 1971); an evaluation of a schoolteacher examination programme (Phelps, 1996); and an examination of the costs and benefits of the heart transplant programmes at Papworth and Harefield Hospitals (Buxton et al, 1985).

Despite the volume of literature focusing on cost-benefit studies and techniques it was described as 'nonsense on stilts' when applied to the choice of a third London airport in 1970 (Self, 1970). It has also been said that cost-benefit analysis attempts to set monetary values on goods and services for which no market exists, making it either impossible or even immoral to attach a value to certain benefits such as human life (Fuchs, 1980). However, the major strength of cost-benefit analysis is that it attempts to systematically consider all the consequences (in cost and benefit terms) of an activity. In doing this it *forces* an analyst or decision-maker to attach some kind of value to each item in the analysis/study or to make explicit why this has not been, cannot be or should not be done. Project work examining special educational provision echoed this point by concluding, inter alia, that cost-benefit analysis focused on the use of resources in relation to the output achieved from their use (Lewis et al 1988: 212).

3.2 Stages of cost-benefit analysis

The literature provides a number of fundamental difficulties in conducting any competent cost-benefit analysis. These include:

1. selecting an appropriate productivity index (whether to use the Internal Rate of Return (IRR) analysis or the Net Present Value (NPV) approach);
2. selecting an appropriate rate of discount;
3. identifying and measuring the costs involved;
4. identifying and measuring the benefits involved; and

5. selecting an appropriate time horizon for investments (Dunn & Sullins, 1982).

This chapter will discuss these common problems encountered by cost-benefit studies by highlighting a number of case studies and examining the processes involved in cost-benefit analyses.

The process of cost-benefit analysis can be broken down into 6 key stages (Armstrong, 1993). In stage 1 the scope of the project is defined - for example a study focusing on an analysis of the costs and benefits of a teacher appraisal programme. Usually, at this stage the main areas of investigation are stated, or the viewpoints sought, which may include the teachers being appraised, those appraising them and the students of the teacher being appraised.

Following identification of the areas of investigation a list of anticipated costs and benefits is constructed in stage 2. Costs may consist of: direct costs which can be directly attached to an activity (such as the cost of printing teacher appraisal material); indirect costs i.e. those that cannot clearly be apportioned; marginal costs that are the incremental costs of an activity; and total costs (such as the entire cost of a teacher appraisal programme). Benefits may also be similarly described, however, they are often more difficult to measure in ways comparable to costs and therefore they are described as either: measurable i.e. they can be quantified easily and uncontroversially; capable of being measured although perhaps with difficulty or in different ways (such as the costing of time given up by a teacher to the appraisal activity); or benefits may be essentially qualitative and incapable of being measured in any comparable way to costs (Fielden & Pearson, 1989).

An important point to consider at stage 3 is what/whose value should be applied to the costs and benefits? There are four approaches to the valuation of factors within a cost-benefit analysis (Drummond et al, 1987). The first is market valuations which could be used for most resource items or by imputing valuations by reference to the market price of similar commodities. For example, the value of a teacher's time whilst marking essays *could* be imputed by reference to the wages paid whilst actually teaching - although some argue that the financial value of this 'marking time' should be lower than that of teaching time as it is not a core

activity of the teacher (Phelps, 1996). The second valuation approach is 'clients' willingness-to-pay estimates' which can be established by asking the client or by observing their behaviour. For example, the trade-off a student makes between a course of study and the income from a full-time job (the 'fee' element of a course of study would also factor in this trade-off). The third approach focuses on policy-makers' views which are either explicitly stated or implicit through their actions. For example, the research grants made to projects examining the National Curriculum could be used to impute policy-makers valuations of school education through the size of research grant made. The fourth valuation approach is that of practitioners' views or professional opinion which could be based on references to court awards made to those who have received an inadequate or unsatisfactory education.

How far 'indirect' and 'non-monetary' factors should be pursued (in terms of attempting to place a valuation on them) is a common problem faced by cost-benefit studies. Common sense dictates that two criteria should be considered: (i) is it likely that the gathering of more information on the intangible items will change the result of the study?; and (ii) are the costs of gathering the information affordable? (Drummond et al, 1987). These questions go to the very root of the analysis involved in a cost-benefit study. One solution to the problem of valuing intangible factors, used especially in healthcare cost-benefit analyses, is to adopt a cost-effectiveness or cost-utility approach where results are expressed in terms of cost per life year gained, for example. This approach has been used extensively to assess the benefits of health care programmes (e.g. Buxton et al, 1985; Drummond et al, 1987). In this research the cost-effectiveness or cost-utility approach is used to develop a benefit index for staff development. This is explained further in Chapter 4: Methods.

Stage 4 of the analysis provides that some cost and benefit factors may be experienced in the future and therefore should be included in the study. It is at this stage that the future costs and benefits are identified. For example, a teacher appraisal activity may take place after 2 or 3 years of teaching and although not an immediate cost it is nevertheless a cost of the teacher appraisal scheme. Similarly, the benefits might not accrue until several years later or may be spread over a specific period of time.

Stage 5 compares the different cost and benefit factors associated with the activity and occurring at different times. It is at this stage that the future costs and benefits are measured. In order to create a fair comparison with current factors future factors will need to be discounted back to present values. The principle behind this is that the valuation placed on a future cost or a future benefit is lower than if it occurred in the present. It can, for example, be argued that to pay a debt of £100 in 7 years time would need an investment now of only £50 at an interest rate of 10% per annum compound interest. Thus £100 in 7 years is 'worth' only £50 now. There are 2 approaches to discounting cost-benefit figures over time: net present value (NPV) and internal rate of return (IRR). The NPV method discounts figures by a set percentage amount over time and therefore provides a present value for a future financial transaction - as shown in the example above. The IRR method operates by discounting figures in a similar way to the NPV method but seeks to produce a present value figure of zero. Essentially, under the IRR approach, the higher the percentage rate of return required to return a present value of zero the more profitable the project being considered. Usually, the IRR technique is used to compare a number of competing projects in order to determine the most profitable among them. The most frequently used method for assessing present value is the NPV approach (Mishan, 1988).

The sixth stage of a cost-benefit analysis is the appraisal of the study. If, following a full investigation, costs are found to exceed benefits the activity/project should not proceed or should be modified in ways which produce an excess of benefits over costs to an acceptable or desirable level. This facilitates, through a manipulation of the factors, the generation of 'what if?' scenarios.

3.3 Examples of cost-benefit analysis

The literature provides many examples of cost-benefit analysis (Kelly, 1994; Royle & Shaw 1988; Howe, 1971; Heywood, 1989; Drummond, 1987), all of which attempt to factor all reasonable costs and benefits in their analyses. The following three examples show some of the techniques used and highlight the effect of their use, including some of the strengths, weaknesses and limitations of each.

One study which assessed the costs and benefits of water systems planning highlighted the different results, in terms of costs and benefits, when the level of analysis was differentiated between national and regional outcomes (Howe, 1971). At a national level typical costs included the construction of the waterway and related operating and maintenance costs. Benefits included the extra revenue generated by the additional traffic using the waterway and the costs saved by diverting traffic from higher cost modes of transportation. At a regional level typical costs were contributions required for flood control measures and necessary harbour improvements related to the waterway. Local benefits included the savings made by local shippers who used the waterway and the increased net incomes of local companies involved in the construction or upkeep of the waterway.

This study highlighted, when examining national and regional costs and benefits that they differ to varying degrees. If national and regional factors are included in the analysis then a 'global' or 'social' cost-benefit analysis should take place - where some costs and some benefits occurring in both national and regional listings cancel each other out, leaving net overall costs and benefits from the project. However, by taking just the national or regional factors a 'local' or 'private' cost-benefit analysis is taking place - the analysis no longer includes costs and benefits to whomsoever they may accrue and may demonstrate a balance of benefits over costs at one level but of costs over benefits at another.

Other research work illustrates that although extremely useful, cost-benefit analysis - if not clearly stated in terms of its objectives and focus - can be misleading. If an analysis is focusing on a particular group affected by a project it should state this clearly at the outset otherwise the

study has the potential of becoming misleading. This is reflected in an American cost-benefit study of a teacher competence test (Phelps, 1996¹).

During the 1980s a group of American researchers undertook a cost-benefit analysis of the Texas Examination of Current Administrators and Teachers (TECAT), a paper-based test designed to determine whether a teacher had basic literacy skills. It was felt by policy-makers that the introduction and administration of the test would alleviate some of the concern expressed by the citizens and elected representatives of Texas that teacher training colleges were producing teachers who were basically unqualified to teach. The teachers union welcomed the test as it was, inter alia, extremely simple.

A subsequent examination of the cost-benefit analysis revealed that it was heavily weighted towards costs:

'... the test was easy, simplistic and beneath the dignity of professional educators, and so studying for the test should not be counted as a benefit. But, at the same time, the teachers, their union, and the school districts were afraid that many would fail the test, so a massive effort was undertaken to prepare the teachers for it and that should be counted as a cost.' (Phelps, 1996: 4)

An excessive cost within the analysis was that of the value of the teacher's personal time devoted to the test. Here Phelps points out that it is economists' convention to value personal time at a substantially lower rate (half the wage rate being typical). An adjustment of this kind *'divides the authors' estimate by half'* (Phelps, 1996: 7).

The benefits achieved from the dismissal of teachers failing the test were also wrongly calculated. Phelps argued that the benefits achieved from a dismissal occurred for years afterwards: *'... they were not just one-time benefits'*. As a dismissed teacher would be prevented from teaching for years, perhaps the rest of their career, then the benefits should

¹ The author culled this text from the internet and any reference to page numbers are those of the web address where the article was placed at that date.

include the recurring benefit of not having to pay the salary of an illiterate teacher. Attention is also drawn to a separate analysis of the data from the original study by Solmon & Fagnano (1990) where they estimated the value over many students' lifetimes of the increased learning the students would gain from more literate teachers.

It is clear that Phelps disagrees with the findings of the original team conducting the cost-benefit analysis. He highlights a common problem of cost-benefit studies - they fail to state, or are ambiguous in stating, their terms of reference and scope of study. Invariably a cost-benefit analysis cannot, due to resourcing limits, cover everything, it must draw and state clearly its limits – as Armstrong's (1993) staged approach indicates. With Phelps' and others' further analysis of the data from the original study a less 'fuzzy' and more complete picture of the costs and benefits was achieved. It would seem that by stimulating further analysis and debate cost-benefit analysis in this case was justified.

A project benefiting from clear terms of reference focused on an analysis of heart transplant programmes at two hospitals in the early 1980s. These were to:

'... identify and carry out a detailed analysis of the resource requirements and thus the costs of the current heart transplant programmes at Papworth and Harefield Hospitals and to relate these to appropriate indicators of patient benefits' (Buxton et al, 1985: 1).

The methodological framework of the study outlined, drawing on similar work carried out in the United States (Evans, 1982), that the research sought to identify the *extra* costs and benefits resulting from the existence of the cardiac transplant programmes at Papworth and Harefield hospitals as compared to those of conventional medical therapy. This is of relevance to this research as the quality assurance activities impose extra costs and benefits on Access Courses.

The work at Papworth and Harefield hospitals did not concentrate on the private costs to the patient, their family or employer - therefore strictly defining its cost and benefit boundaries. For

example, it did not consider any 'spin-off' benefits to other patients or the research community of the heart transplant programmes.

Like many other studies involving the assessment of 'worth' of human life or health, the study adopted a cost-utility approach - which overcame the problem of trying to assess health effects in money terms (as in cost-benefit analysis) and that of measuring life years gained irrespective of their quality (as in cost-effectiveness analysis). Instead the study measured the improvement in the quality of life (for example, how far the patient could walk unaided, and other activities they could do 'better' or 'more' than before, such as gardening).

To assess the benefits of the heart transplant programmes fairly the study required a suitable group with which to compare those accepted for heart transplant. This proved difficult as the most appropriate group (those rejected from the programme on psychological grounds, or because they were just outside the age limits) was too small to be useful. Therefore the group against which comparisons were made were those accepted for and awaiting transplant. Although large enough, this group had its weaknesses as patients in the group '*... may be the iller patients for whom a suitable donor heart is not available*' (Buxton et al, 1985: 5). Additionally, those '*patients still waiting at any point in time may be those with the relatively better prognosis who have not been put at the top of the "waiting list".*' (Buxton et al, 1985: 5).

Cost comparisons also proved difficult to establish. The research team involved in the study found it extremely difficult to establish the costs associated with those accepted and those not accepted for the transplant programme. The relatively small numbers of patients involved compounded these difficulties (sampling was ineffective). The group finally decided to consider only those costs that were additional (resulting from the transplant programmes).

In their summary the research team accepted as a fundamental limitation of the study, the fact that no formal control group existed (i.e. a group of similar patients who had not undergone the same methods of treatment). As a result of this comparisons were made with patients who had been accepted for, but who had not received, a transplant. The problems of such a comparison have been highlighted above.

The review of cost-benefit literature shows that it has been developed from a traditional, perhaps narrowly defined application to accommodate wide and varied factors that are difficult to measure in ways comparable to costs. This has been particularly so in health care programmes such as those carried out by Buxton *et al* (1985), Drummond *et al* (1987) where cost-utility analysis or cost-effectiveness analysis has been successfully used.

In education few cost-benefit studies have taken place that concentrate on the value of education rather than the cost of it - although various texts outline the techniques available for such studies (Mace, 1986; Steel & Sausman, 1997). However, fragmentary and limited resources, and an increasing desire for value for money, have led to concerns focusing on the appropriateness of the allocation of those resources. Cost-benefit analysis facilitates an examination of the utilisation of resources.

The study of the Texas TECAT shows that such analyses can illuminate cost and benefit areas that may not be immediately apparent or appreciated. Chapter 4: Methods seeks to utilise the illuminative aspects of cost-benefit analysis to capture factors that are not necessarily financial or easily measurable. By explicitly stating these factors and explaining the values attached to them a competent evaluation of the quality assurance mechanisms of Access Courses can take place. The notion of 'cost-utility' is adapted and used to compare some less tangible benefits with more tangible cost factors.

Chapter 4

4. Methods - data collection

4.1 The research topic: A cost-benefit analysis of the quality assurance mechanisms of Authorised Validating Agencies

Despite the large amount of published material on Access provision, covering its development and recognition as a valid route into higher education (e.g. Davies & Parry, 1993; Parry & Wake, 1990; Lieven, 1989), little work had been done on directly evaluating the procedures which assure/uphold the quality of Access programmes¹. However, Davies (1993) had for a long time campaigned for a: *'serious cost-benefit analysis of the operation of Authorised Validating Agencies.'* As a result of this there emerged a proposal² outlining research work required to assess the relative costs and benefits of a number of quality assurance mechanisms within the national framework for the recognition of Access Courses. It was anticipated that this work would facilitate the development of a cost/benefit model with the potential for more general and wider application. The proposal formed the starting point for the development of the research methodology which consisted of an identification of the costs and benefits associated with a number of different arrangements for quality assurance within the national framework; and an analysis of the relationship between the costs and benefits.

At the beginning of the research, the National Framework for the recognition of Access Courses consisted of 37 validating agencies (or AVAs) who issued Access Certificates to students on Access Courses recognised by them (although, due to restructuring and mergers, this number reduced to 34 – see Chapter 1 – Access education). All AVAs had their own quality assurance mechanisms or processes for recognising Access Courses. These recognition mechanisms/processes consisted of activities which an Access Course providing institution participated in to achieve recognition within the National Framework for their courses. Others,

¹ Although Parry (1995) had produced a report on the operation/effectiveness of the National Framework for recognising Access Courses.

² See Appendix 1 for a copy of the proposal.

such as HEI representatives, outside of the Access Course providing institution, and AVA, were also involved in these mechanisms/processes. Therefore, a number of actors or stakeholders were affected in cost and benefit terms by the quality assurance processes of AVAs.

An important part of the work outlined in the proposal was to examine not only the quantifiable costs and benefits but also the less quantifiable ones. The identified factors were classified as quantifiable, capable of quantification or qualitative. Qualitative factors, that were not capable of quantification so as to make them comparable with other factors, were not included in the main analysis but remained in the environment of the cost-benefit model (these are discussed later in this chapter and Chapter 5: Findings. Chapter 3: Economic analysis in education, shows how some cost-benefit practitioners have attempted to embrace both data types in their analyses. Some of these have been applied to this research).

Historically, the approach taken to conduct cost-benefit analysis has been positivist where *'Investigators ... (treat the social world) of natural phenomena as being hard, real and external to the individual (and) will choose from a range of traditional options - surveys, experiments, and the like.'* (Cohen & Manion, 1992: 8). In many texts on cost-benefit analysis, for example, Mishan (1988), such a positivist (or objectivist) approach was taken whereby the costs and benefits were analysed and an attempt was made to quantify them. However, concern had been raised over the use of methods such as these that focussed on quantification, computation and the use of statistical techniques (Ions, 1977; Cohen & Manion, 1992) as they produced results that gave a synthetic version of events taken from a restrictive environment. They either excluded some aspects or imposed inappropriate forms of measurement on them (Holbrook, 1977). To counter this some had questioned the usefulness and accuracy of participant observation as a data gathering technique when compared to a carefully controlled interview (Argyle, 1978).

Others explained this split in research approaches as being between the 'scientific' (objective approach) and 'humanistic' (subjective approach), and they claimed the two were not incompatible: *'A person with a scientific viewpoint will prefer re-planning, focusing,*

standardisation, quantification, and controls; a humanistically oriented evaluator will lean toward greater openness. But few individuals would adopt either style for every aspect of an investigation, and none would insist on applying a uniform style to all studies.' (Cronbach, 1988: 32).

It was apparent, through the early stages of the research, that the work would involve looking at such varied factors as increased student confidence and the financial cost of course provision. Since, clearly, a common approach to the measurement of such widely different factors would not be appropriate a combination of qualitative and quantitative methods was adopted drawing on the work of, inter alia, Reichardt & Cook (1979) and Sax & Fine (1979). This was a major strength of the work as it is concerned with combining both methods and usefully incorporating the valuable features of each (Merton & Kendall, 1946).

It was considered important in this research to produce a model with more general or wider application thus enabling users to evaluate their own, unique, provision and not merely observe the results from another provider (Light & Smith, 1970). This would enable the model to be developed and applied in different scenarios to Access Course provision – such as work-based learning/training programmes.

As a result of the structure of the national framework the most influential groups among the various actors, in terms of the impact/effect on the quality of Access Courses, were the Authorised Validating Agencies (AVAs). Therefore, the research focused, primarily, on constructing a cost-benefit analysis of the quality assurance processes of the AVAs. In order to assess these effectively, the analysis was designed to 'un-pack' the AVA's procedures and assess their impact on Access Courses within their providing institution membership.

In order to generate a model capable of wider and more general application across the different types of Access provision and validation, various factors were considered when choosing suitable AVA 'vehicles' to include in the analysis. These included the size of the AVA, its geographical catchment area and location, whether it was an Open College Network (OCN)

institution or in transition to OCN status, and its administrative methods and 'make-up'. This allowed different arrangements such as actors involved and processes/procedures undertaken to be considered in the work. The literature available on AVAs, particularly from Periodic Review literature and Higher Education Quality Council publications (Higher Education Quality Council, 1994), was of great assistance in this area. The consideration of the various factors helped illustrate the different quality assurance mechanisms and procedures and informed the construction of the cost-benefit model.

The methodology for selecting and examining case study Access Courses was not pre-determined at the beginning of the research but was open and iterative in nature. It was shaped and developed gradually as understanding of the diverse nature of Access Course provision and validation grew and as practice in the field changed.

Also of importance to its potential for wider application was the 'manipulability' and organic nature of the model since decision-makers *'would find little of use in a report that simply compared the end results of a now obsolete Plan A and a now obsolete Plan B'* (Cronbach, 1988: 13). In order to produce a model capable of such manipulation an approach was taken whereby widely differing Access Course case studies were selected. These programmes, with differing operating mechanisms and procedures, were examined to identify cost-benefit factors and then a model was developed from this analysis.

4.2 Selecting a case study course – the pilot

Various data sources were consulted in order to establish initial costs and benefits of the external quality assurance processes. These included data resulting from the attendance at panels, panel evaluation forms (providing feedback at the panel to the AVA), providing institution quality audits, discussions with tutors/development workers, questionnaires administered by the providing institution, and submission documents. Initially, all of these data referred to a single Access Course chosen to be typical within an AVAs portfolio of recognised Access Courses. The AVA chosen was the then London Open College Federation (LOCF) (now reformed as the London Open College Network (LOCN)). Guidance relating to course and AVA selection was provided by the project Advisory Group (see Appendix 2 for details of the group).

4.3 The costs and benefits

The quality assurance procedures had effects on a number of what Harvey and Green (1993) referred to as 'actors' or 'stakeholders'. The extent or impact of the effect varied according to the stakeholder's involvement with the Access Course. Generally, however, stakeholders affected included:

Higher education Institutions;

Students on the Access Course;

Staff teaching on the Access Course;

The Access Course providing institution;

Panel/recognition meeting members (those excluded from the above groups); and

Funders/sponsors of the Access Course (e.g. government/the taxpayer).

From the pilot case study there emerged various cost-benefit areas, all of which were connected with, or were a direct result of, the validation/recognition procedures detailed in Chapter 1.

Certain of the factors listed in Table 4:1 had different definitions and effects dependant upon the stakeholder concerned. For example, a student interpreted 'funding' as a grant covering their fees. For a providing institution it was interpreted as a predetermined amount receivable per student enrolled on a particular programme of course of study. However, some stakeholders felt that Access students drew more heavily on the providing institutions resources than more traditional students (such as A level), and as a result drew more heavily on the funding element.

<i>Costs</i>	<i>Benefits</i>
Development costs	Funding
Validation costs	Additional student numbers
Review costs	Esteem
	Better links between HE and FE
	Staff development/curriculum development
	Progression

Table 4:1 Initial costs and benefits – providing institution

From discussions and interviews, which took place during the pilot stage of the project, it was possible to construct the following diagrammatical representations of costs and benefits (Figure 4:1 and Figure 4:2). These, primarily, related to the Access Course providing institution. However, they were developed for use as a framework for discussion with other actors/stakeholders and essentially constituted a form of interview schedule.

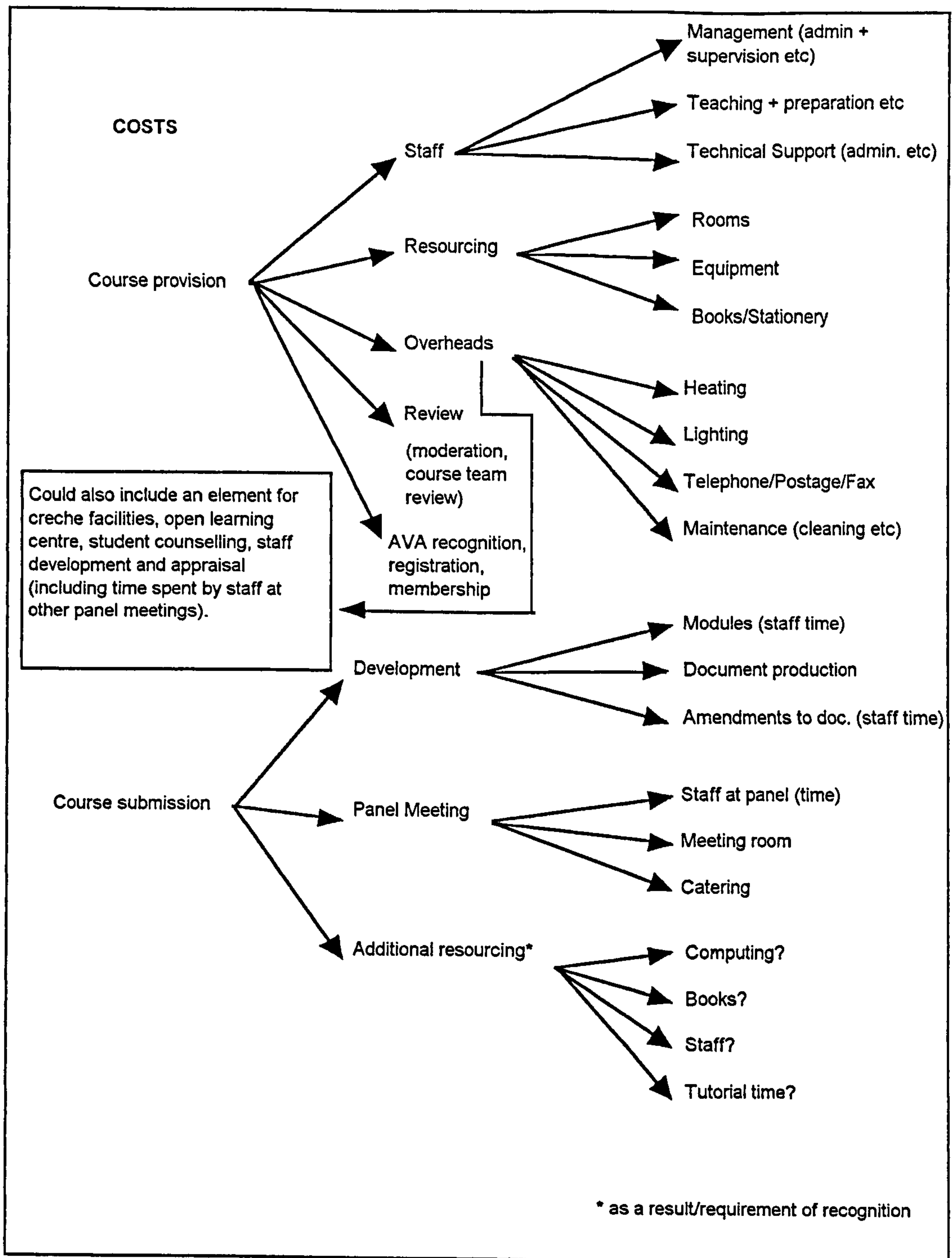


Figure 4:1 Costs associated with Access Course provision

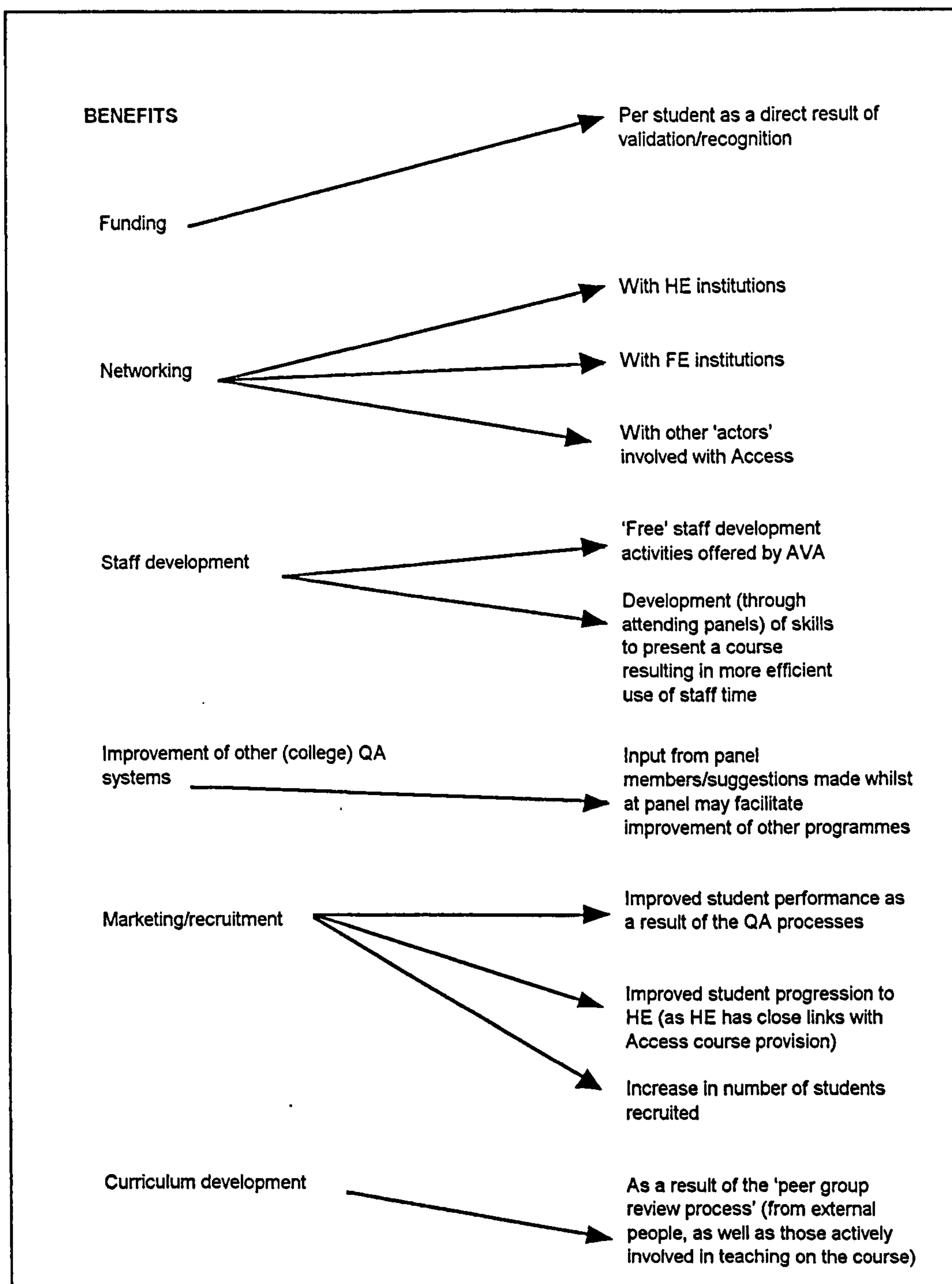


Figure 4:2 Benefits associated with Access Course provision

Costs

Development costs

Costs under this heading were those that emerged whilst preparing the course for validation. They included time spent by the Access tutor writing a course document for submission and time spent by others from the Access Course providing institution in the development of the course.

Validation costs

These were identified as those costs necessary for recognition within the National Framework, and also for funding. They included costs incurred in the validation process, such as the room used for validation, heating, lighting, refreshments etc. Also, initially grouped under this heading were the costs associated with AVA membership.

Review costs

These included the costs incurred whilst carrying out the review activities (the review activity costs of the validating agency were covered by their membership fee and so were not included separately here in the first instance). Costs were based on time spent by members of staff in preparation for and during the annual course review. Student feedback costs were also included here - consisting of the time spent distributing and analysing questionnaires.

Benefits

Funding

A direct result of the Access Course complying with the AVA initiated quality assurance mechanisms, and thereby achieving kitemark status, was that it then became eligible for funding from the FEFC. Although the funding element received would be used to cover the provision costs of the Access Course, the element was nevertheless considered a benefit as it was an input into an emerging cost-benefit model defined by those with whom discussions and interviews had been held. The cost/benefit model and

its operating environment are detailed further in section 4.5 – Assessing the costs and benefits. Included within the environment of the model was the notion that the funding element was additionally a transfer payment and appeared as a cost elsewhere – such as a cost to society/the taxpayer. Some studies referred to the focus of the cost-benefit work in this way as an examination of 'local' as opposed to 'national' or 'global' costs and benefits. Chapter 3: Economic analysis in education discussed this issue and provided examples of where this had been used.

Additional student numbers

The national recognition procedures were designed to improve the status and currency of the Access Course and assure their quality and thus be more attractive to non-traditional learners – with a beneficial consequence that numbers would increase. To calculate the extra numbers of learners generated by the *recognised* Access Course it was suggested by members of the Advisory Group to the research, that a comparison should be made between a course that had been through the AVA recognition requirements, and one that operated outside the National Framework. This benefit would accrue to the providing institution and would take the form of additional funding. However, no programme of study comparable to an Access Course existed outside of the National Framework, which made calculations under this benefit factor problematic.

Esteem

This factor was identified as the value to the staff of their increased confidence/satisfaction and status in the providing institution when a course with which they were associated was recognised. This esteem factor may also have been of beneficial value to the providing institution.

Better links between HE and FE

Respondents considered this benefit, in the pilot work, to be of great importance. Not only did it allow higher education institutions to influence Access Courses for the benefit of their own institutional requirements (through their involvement in the quality

assurance arrangements), but it also enabled FE (providing institutions) to secure better/more higher education opportunities for their students.

Staff development/curriculum development

Many respondents considered these to be the most important areas affected by the quality assurance mechanisms as through these the student ultimately benefited through increased performance and progression.

Progression for students

This was expressed as progression to higher education or employment. Possible methods of measurement included the enhanced income post-Access (for immediate employment), or the enhanced income post-higher education.

This general framework of factors proved extremely valuable as it highlighted problem areas in the work such as the difficulty or impossibility of measuring some, essentially qualitative, factors (a mechanism for incorporating qualitative factors in a quantitative model is discussed later in this chapter (4.5 Assessing the costs and benefits) – where a measure of 'value' had been attached to participation in the Access Course validation/recognition process). It also facilitated lively debate among those involved and allowed a more focused approach to be adopted following these exploratory early steps. By conducting fieldwork focused initially on one course and then analysing it with others, the study could be redirected, extended and/or restricted as appropriate to the findings of the fieldwork. Maintaining this approach, whereby each stage of the project was influenced by the experience of the previous stage, allowed the work to be flexible enough to accommodate the policy and practical changes that emerged over the period of the study and was a major strength of the approach.

4.4 The main study

By using an iterative approach in selection of case study courses and in the development of the model a greater texture of reality (Stenhouse, 1979) was achieved. Extensive detail in one case study led to a request for the same amount of detail in another. Likewise, detailed benefit and cost data within the model for one case study led to the same level of detail in another. As a result, different methods of calculating charges for services etc. were accommodated in the model. Challenges to the basis of calculation in one case study strengthened the model as this led to a re-consideration of calculations in other cases.

In studies of almost any kind '... *the choices to be made are almost innumerable*' (Cronbach, 1988: 4) and in order to determine focal points within the work many sources were consulted. These ranged from discussions with the various actors involved in Access - such as representatives from AVAs, Higher Education Quality Council, Access students, tutors, and writers on Access - to a search of the available literature on Access.

Having established Access Courses to be appropriate 'vehicles' through which the quality assurance processes of AVAs could be examined, a suitable method of selecting case studies was required. In order to produce a model capable of wider and more general application, a wide variety of courses were required for selection. During the pilot stage there were over 800 recognised Access Courses in England, Wales and Northern Ireland validated by approximately 37 AVAs, although as a result of mergers this number was reduced to 34 AVAs and substantially more Access Course programmes (Universities Central Admissions Service, 1999). Clear patterns in the quality assurance arrangements made the use of a small sample suitable and the preliminary pilot work indicated that four courses or programmes kitemarked by three different AVAs would provide sufficient breadth to fully explore the cost and benefits of the quality assurance processes.

Three AVAs were selected with consideration given to the various factors mentioned earlier in the pilot study (size, geography, catchment area, location, structure, whether it had Open

College Network status, administrative methods). Two of the AVAs (London Open College Network and West and North Yorkshire Access Network³) had commonalities in structure, size, method of operation, and the way in which fees or costs were distributed or charged - although they operated in different geographical locations with unique histories. London Open College Network (LOCN) had always been an Open College organisation and West and North Yorkshire Access Network (W&NYAN) moved toward that status. The third AVA, Hertfordshire Access Consortium, was chosen as a contrast to the previous two as its structure differed i.e. it was dominated by one HEI and had fewer member organisations. Additionally, it was not part of the Open College Network, and its fees/charges were paid for 'in kind' by the provision of services of its member institutions.

London Open College Network (LOCN)

London Open College Network was a member of the National Open College Network and provided an extensive range of quality assurance and support services to its member institutions. The agency was involved, therefore, in accrediting adult learning at all levels and in a variety of settings, including Access to higher education programmes. LOCN had established its formal status as a Company Limited by Guarantee, with full charitable status, being a partnership of adult, further and higher education institutions, together with voluntary organisations, employers and LEAs. The agency's work included validation of Access programmes, providing learners with an Access certificate and Open College credits; it ensured quality assurance through National Open College Network (NOCN) standard processes; and it offered flexible opportunities through credit accumulation and transfer. LOCN built on the experience of Access provision in inner London, dating from 1975 and developed to promote equality of educational opportunities for adults' under-represented in higher education. The number of Access programmes in London at the time was considerable, both 'kitemarked' courses and those 'in the pipeline'. In 1994 (when the research began), the Register of Access Courses identified 99 Access to HE programmes kitemarked by

³ Now reformed as the West and North Yorkshire Open College Network.

LOCN (Higher Education Quality Council, 1994). In 1996/97 that number had increased to 170⁴.

West and North Yorkshire Access Network (W&NYAN)

In 1993 West and North Yorkshire Access Network became an Open College Network - which allowed Access programmes and other types of credit-based provision to be recognised within one organisation. As a member of the National Open College Network (NOCN), this AVA operated standard structures and processes for accreditation of all kinds of adult learning, including Access to higher education programmes. W&NYAN's existing Access Courses had been validated under the AVA's previous arrangements and these courses were adjusted to NOCN conventions when they came forward for their scheduled renewal of approval (Higher Education Quality Council, 1994).

Hertfordshire Access Consortium (HAC)

Hertfordshire Access Consortium was formed from a collaborative network of the University of Hertfordshire and local further education provider colleges. One of its aims was to promote the development and improvement of Access Courses and to operate as a validating agency, providing an assurance of course quality and overseeing processes of course monitoring and evaluation. It sought to increase the take-up of higher education opportunities by those who had benefited least from previously available provision. During the research, HAC held discussions with Buckinghamshire OCN with a view to a possible partnership (Higher Education Quality Council, 1994) but this merger did not take place.

As the number of courses for study was relatively small it was important that they should be as diverse as possible in terms of delivery, content, structure, progression routes (into and out of the programme), size, targeting policy and so on. This would ensure the model could be relevant and applied to many differing scenarios.

⁴ Personal communication between the researcher and Ros Wilson, Access Course Development Officer, LOCN (August 1997)

The research concentrated on full-time courses, as at the time that was the dominant model of Access Course provision. Nevertheless in keeping with the desire to create a model with wider application it was anticipated that future development might enable variations arising from part-time courses to be incorporated into the model.

Instructive in the selection of the first three courses was the '*Access Courses Database*' developed by the Department of Continuing Education at City University (now administered by Universities Central Admissions Service) which provided data on course content, delivery, structure, size, and site of delivery. Also, the database provided information on when the course under examination had been validated and timetabled for re-validation (approximately every five years, although this differed slightly from AVA to AVA). This therefore enabled a re-validated course to be incorporated into the work, alongside courses being validated for the first time.

4.4.1 The chosen courses

Because the researcher's background had been in the business/technology sphere, three of the chosen case study courses had strong elements of these factors within them. This allowed the researcher to utilise his understanding of the disciplinary quality assurance issues involved with such provision. However, this presented a danger in that the model could become weighted towards certain Access Course types. To compensate this perceived weakness a large multi-modular, science-focused, course was chosen to challenge the model. In addition, it was the quality assurance activities of the AVA that were examined rather than those of the course itself. Therefore, as the course was only the vehicle for the study, the discipline of the course was less significant.

The four courses chosen were:

1. A large multi-modular Access programme - examining the costs and benefits of West and North Yorkshire Access Network's quality assurance processes
2. An Access to Information Technology programme - examining the costs and benefits of West and North Yorkshire Access Network's quality assurance processes
3. An Access to Business Studies programme - examining the costs and benefits of London Open College Network's quality assurance processes
4. An Access to Commerce programme - examining the costs and benefits of Hertfordshire Access Consortium

4.4.2 Methods of observation/acquiring the data

Cohen & Manion (1992: 125) stated that: *'Whatever the problem or the approach, at the heart of every case study lies a method of observation ... (there are) two principle types of observation - participant observation and non-participant observation.'*

Participant observation affords a deeper understanding of the subject under examination and may be demanding in terms of resources (for example time), whereas non-participant observation allows a non-integrated, perhaps more objective, approach to emerge. Again, in order to tap the rich advantages of either approach this work combined the two methods - in a participative way the researcher was involved in the panel process as a panelist, scribe and Chair, and in a non-participative way the researcher merely 'observed' the effect of a quality assurance process of the AVA on the course by examining course and validation literature, visiting providing institutions, and consulting with staff/students.

In addition to the primary data obtained from participants in the project, various sources of secondary data, in particular panel evaluation forms, were also consulted. Interviews with representatives of the Higher Education Quality Council also provided useful and informative data, as did published material on evaluating the national framework for the recognition of Access Courses (Davies & Parry, 1993; Parry, 1995). Privileged access was provided by HEQC to examine the responses made by various education institutions to HEQC's proposed withdrawal, in 1996, from the National Framework for the recognition of Access Courses. This material informed the research but for confidentiality reasons was not available for quotation or direct reference. Nevertheless, the wide number and variety of data sources facilitated a process whereby information gained from one source could be checked and validated by another.

Following the selection of courses, through close collaboration with the AVAs, the method of observation for each case study took the following shape:

Course observation

The researcher attended the course panel meeting of the case study course. This afforded familiarity with the practicalities of the recognition/validation procedures of the AVA, allowed participation in the procedure itself, and provided contact with the course representative to explain the research. This personal approach to selection of courses was considered successful as on no occasion did the course representative decline the opportunity to be involved in the work. As the panel/recognition meetings were busy affairs it was important not to take up too much of the course representative's time. Therefore a follow-up meeting was arranged, for a later date, to discuss the project further with an outline of the project work⁵ provided in advance.

The 'follow up' meeting was set approximately two weeks after the panel meeting (so that the project details/discussion at the panel meeting were still fresh in the course representative's

⁵ See Appendix 3.

mind) to discuss the research more fully and to establish, and begin assessment of the costs and benefits of the quality assurance processes as they applied to the course.

Panel evaluation forms

With all of the AVAs participating in the research some form of panel evaluation took place. In the two larger AVAs (London Open College Network (LOCN) and West and North Yorkshire Access Network (W&NYAN)) this feedback took the form of 'evaluation sheets' distributed at the beginning of the panel, and completed and returned to the AVA officer following the panel. These provided a rich source of information regarding the panel members' thoughts on the panel process itself. However, these evaluations were designed to measure the effectiveness of achieving the panel's objectives rather than directly with individual costs and benefits. Nevertheless, it was possible to analyse evaluation sheets from one of the AVAs (W&NYAN) to compare the responses of those panel members who had attended panel meetings before with those who had not, and from this some measure of benefit to individuals of attending the panel was determined.

The evaluation sheets covered a wide variety of courses and participants from higher education, further education and the voluntary sector. However, only those relating to Access Courses were analysed here. From W&NYAN 68 evaluation sheets were analysed from Access Course panels throughout 1994, 1995 and a limited number from 1996.

4.5 Assessing the costs and benefits

Initially a comprehensive list of costs and benefits - including direct and indirect, and opportunity costs - was produced and these related to a comprehensive list of actors and stakeholders. This built on those factors established in the pilot work detailed earlier in this chapter. Within this 'framework' for assessing the costs and benefits were sub-groups of direct/indirect costs and benefits, and 'opportunity costs'. It was found that compartmentalising the work in this way facilitated a comprehensive debate of the costs and benefits with all the

'actors' or organisations involved/affected by the quality assurance processes. Initially this resulted in the representation of the costs and benefits to the various 'actors' as displayed in Table 4:2.

Higher Education Institution
<i>Cost factors</i> <ul style="list-style-type: none"> • AVA membership • Sending staff to panel meetings • Sending staff on moderation duties <i>Benefit factors</i> <ul style="list-style-type: none"> • Funding from Access students entering their programme • Influence on Access Course development
Students enrolled on the Access Course
<i>Cost factors</i> <ul style="list-style-type: none"> • Time commitment to quality assurance activities such as feedback <i>Benefit factors</i> <ul style="list-style-type: none"> • Increased confidence • Increased earnings following graduation
Staff teaching on the Access Course
<i>Cost factors</i> <ul style="list-style-type: none"> • Time commitment at panel meetings • Moderation activities • Course development/review activities <i>Benefit factors</i> <ul style="list-style-type: none"> • Use of quality assurance processes as a lever for more resources for their Access programmes • Curriculum development through attending other panels/moderation activities • Staff development through attending training sessions organised by their AVA
Panel/recognition meeting members (those not included in the above groups)
<i>Cost factors</i> <ul style="list-style-type: none"> • Time commitment at panel • Moderation activities <i>Benefit factors</i> <ul style="list-style-type: none"> • Curriculum development for their own programmes • Staff development (e.g. how to present courses for recognition, the politics of Access) • Access students progressing to their programmes/institutions
Funders/sponsors
<i>Cost factors</i> <ul style="list-style-type: none"> • Funding <i>Benefit factors</i> <ul style="list-style-type: none"> • Better trained workforce • Fewer unemployed (as they are either on the Access Course, Higher Education course or in employment)

Table 4:2 Costs and benefits to individual actors/organisations

The model focused on the three key groups of potential users/stakeholders in the system – students, Access Course providing institutions and HEIs. Others, such as employers, were excluded from the core model to ensure that the more diffuse costs and benefits did not obscure the central issues for direct users (this is common practice and is discussed in the example cost-benefit studies in Chapter 3: Economic analysis in education). Figure 4:3 shows a visual representation of the environment of the model. Factors were included if costs and benefits were within the parameters of the core model (i.e. they directly affected one of the three key stakeholders).

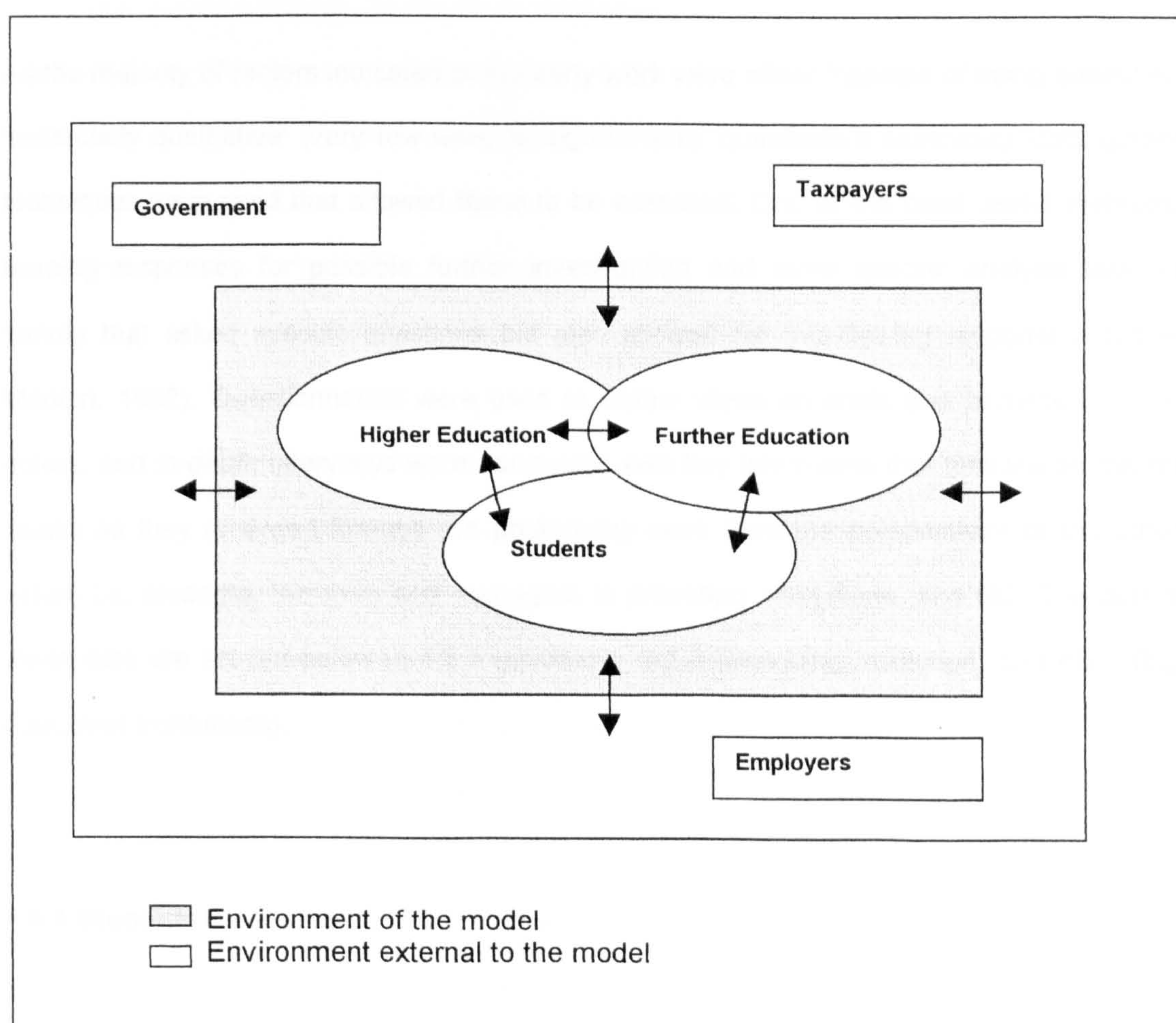


Figure 4:3 The Model within the environment

The pilot work confirmed that costs and benefits could be split into three groups:

1. quantitative costs and benefits - those which are usually expressed in monetary terms such as funding and certification costs;
2. costs and benefits capable of quantification - such as time spent at the panel; and
3. costs and benefits that were essentially qualitative - such as the influence on Access Course development for a HE institution.

In addition, Armstrong's (1993) six-stage procedure for conducting cost-benefit analyses (as detailed in Chapter 3) provided assistance with the identification and assessment of cost and benefit factors.

As the majority of factors indicated in the early work were either 'capable of being quantified' or 'essentially qualitative' (very few were 'straightforward' quantitative exercises), data gathering techniques were used that allowed these to be assessed. One of the most useful methods for framing responses for possible further investigation and more specific analysis was via a survey that asked specific questions but also allowed for free-flowing responses (Cohen & Manion, 1992). Questionnaires were used to obtain views on costs and benefits from some actors, and in-depth interviews were conducted with key informants that focused on the major issues as they emerged through the preliminary work from the perspectives of the different actors i.e. students, lecturers and managers in providing institutions, and HE. The details of these data are set out below in 4.5.1 (students), 4.5.2 (providing institution) and 4.5.3 (higher education institutions).

4.5.1 Students

To gain insight as to the perceptions and understandings of the students in the case study courses, a questionnaire was developed that sought data on general quality assurance issues involved in Access (see Appendix 4). These included questions regarding age, ethnicity, gender, facilities available (such as crèche, a 'study' or 'base' room), tutorial support, and resources available. The questionnaire then went on to ask questions designed to generate

more qualitative responses; such as asking the respondents to list, in order of importance, first the 'costs' of doing the Access Course, and then the 'outcomes/benefits' of doing the course. The responses generated were then coded or 'classified' into groups to produce a ranking of costs and benefits, as viewed by the students, within the model. Green et al (1993) had been instructive in their approach to coding qualitative responses with work carried out at the University of Central England examining student satisfaction. This work classified or grouped factors into cost-benefit areas such as 'financially rewarding', 'confidence building', and 'time consuming'.

All of the factors listed by the students related to the course and not the quality assurance processes – as the students had very little, if any, involvement with them. Where they did, it involved feeding back their impressions of the course to the Access Course moderator during one of their visits. Generally, this involvement in the quality assurance processes was not recognised as such by the students. It appeared, to them, to be part of the course and they had difficulty recognising the distinction between the course and its quality assurance processes.

As some of the data required in the questionnaire was personal and/or sensitive in nature, there was a cover sheet attached to the document outlining that any information given would be treated with the strictest of confidence and only used for the research work stated (Bell, 1992). Also, to show that there was be some reward or '*pay off*' (Preedy & Riches, 1985) the questionnaire stated that the results of the work would be available to the students and an address was provided where requests for further information on the work could be made.

In order to achieve a high return of questionnaires they were administered 'in person' by visiting the providing institution (through arrangement with the course tutor), introducing the work to the group, and handing out the questionnaires. Also, whilst the students completed the documents, the researcher had been available to answer any questions on the work. This technique resulted in a response of over 70% for all the courses studied. However, the questionnaires were typically administered towards the end of the course so 'non-completers' (who were not in attendance) did not have an opportunity to express their views. This may have had implications

for the validity of this part of the work as it was unknown whether those who failed to complete the questionnaires would have given the same answers as those who did (Belson, 1986). Although, the questionnaire sought general views from the students concerning quality assurance issues there was a danger that the views of 'non-completers' would not be incorporated, therefore attempts were made, through liaison with course tutors, for the questionnaire to be forwarded to these students. The questionnaires were designed and administered during the early stages of the research and provided data on student background, programme of study and views on Access Courses. This data also informed the identification of other cost-benefit factors as a section of the questionnaire focused on the students' perceived costs and benefits associated with the Access Course.

Analysis of the questionnaire was made using the database package *Paradox* to conduct frequency counts on specific age-ranges, gender, ethnicity, and also to code/classify the qualitative responses in some way by conducting a form of content analysis/word search where key phrases were identified.

The benefits of the external quality assurance mechanisms were difficult to ascertain for the students because they were invisible to them most of the time. A cost factor most often mentioned was the time commitment required for studying the course, and an often-mentioned benefit factor was the acquisition of useful study skills. It was interesting to note that when asked to list costs and benefits associated with the Access Course, the students surveyed listed far more benefits than costs.

Essentially, the key variable within the student area of the model was the proportion of the eventual earnings figure attributable to the Access Course's quality assurance mechanisms. It appeared that there was a chain of causation between the earnings potential of the Access student and the quality assurance mechanisms. Typically, earnings are dictated by the level of education an individual undergoes (Hough, 1994; Denison, 1964) – the higher the level of study and qualification equates to a greater earnings potential. Therefore it was reasonable to argue that a greater proportion of eventual earnings for an Access student should be ascribed to the

degree programme they subsequently undergo (60% to 80%). However, had the traditional Access student not studied on an Access programme, they would have had no other route into higher education and subsequent graduate employment. There was a chain of causation, therefore, between eventual graduate earnings and the quality assurance mechanisms of the AVA (see Figure 4:4 below). It was reasonable to argue that: (a) if it were not for the quality assurance mechanisms the Access course would not have been a validated programme and, as a result, would not have secured eligibility for entry to higher education; and (b) the quality assurance mechanisms of the AVA added more value to the Access Course than internal (college-based) quality assurance mechanisms. The factors of the external (AVA-initiated) quality assurance mechanisms which added value to the Access Course included staff and curriculum development activities provided by the AVA, networking opportunities, transparent validating procedures, and external moderator expertise/objectivity.

It was important to note that during the mid-1990s (the period in which the model was based), quality assurance mechanisms within Access Course providing institutions were not as advanced as they are now. As a response to the move away from an inspectorial approach to assuring quality, many colleges were in the initial stages of developing their own systems for assuring quality. Thus at the time, for most colleges, the benefits of quality assurance derived almost entirely from the AVA.

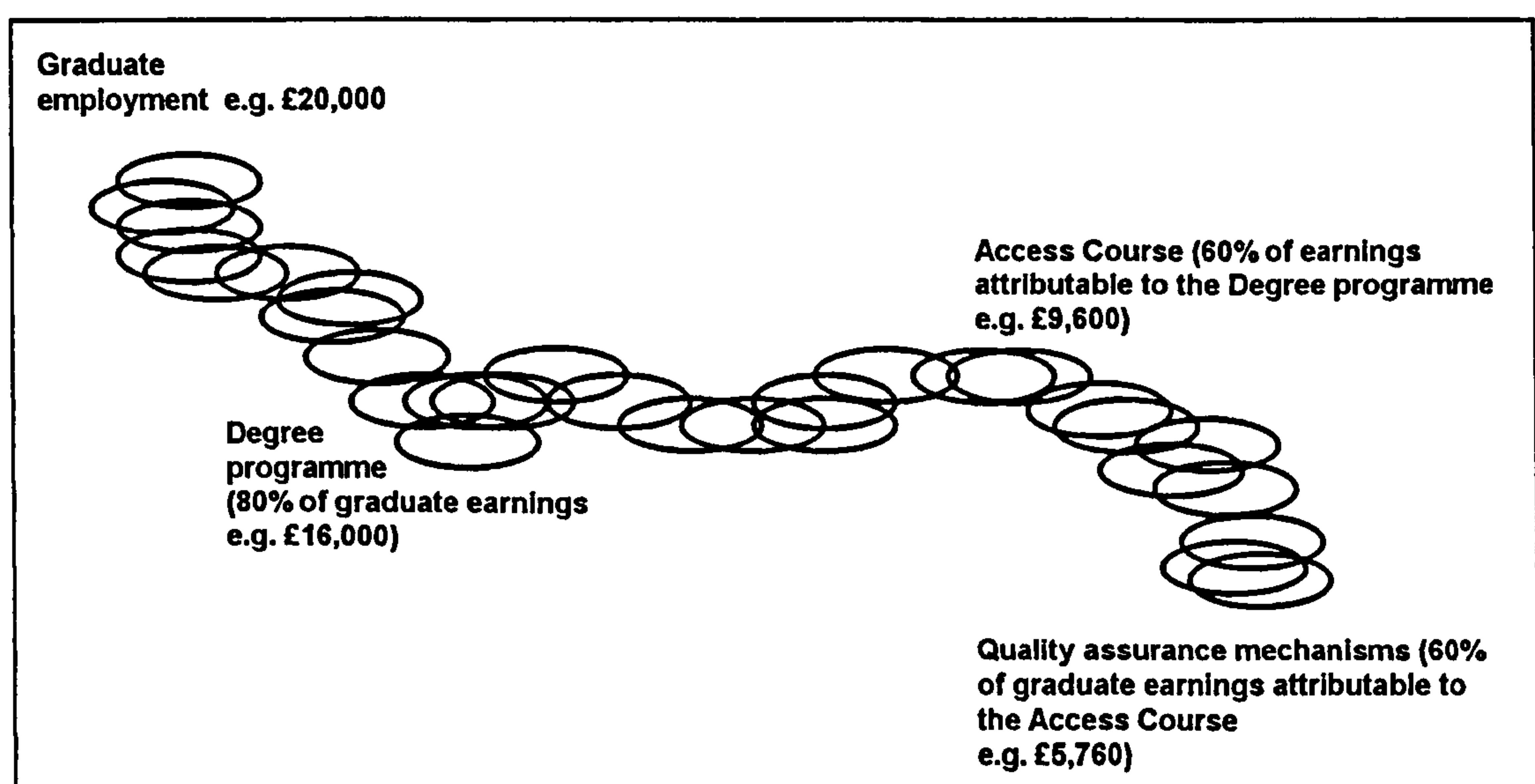


Figure 4:4 The quality assurance chain of causation

The percentage of the graduate earnings figure within the model ascribed to the quality assurance mechanisms was based upon the following. Of the eventual graduate earnings figure, 80% had been ascribed to the degree programme undertaken by the student. Elsewhere within this chapter it has been stated that the percentage of eventual earnings attributable to education undergone (usually focusing on degree-level education) should be between 60% and 80% (Hough, 1994; Denison, 1964). The higher part of this scale had been used within the model, as the financial benefit of a degree programme was likely to be greater for non-traditional learners than those who have studied and progressed through a more traditional approach. For example, more traditional students were more likely to achieve 'graduate-type' earnings without a degree than less-traditional students – who were typically employed in low status, less professional work. However, this variable could be changed within the model as more detailed data became available on progression routes and earnings potential for non-traditional learners. For instance, the figure in the model could be adjusted to reflect regional differences, ethnicity and gender of the learner.

An alternative approach was to argue that 80% of the graduate earnings figure should have been ascribed to the student having studied the Access course itself – because the learner would not have entered onto the degree programme without it. However, the literature on progression of Access students onto degree programmes indicated most Access students progressed onto social sciences programmes of study at degree level (Davies, 1994). The majority of this provision was offered by the post-1992 universities who had less strict entry requirements than the 'old', pre-1992, universities and had historically enrolled applicants without traditional qualifications. Therefore it was possible for applicants without Access Certificates to enter a degree-level programme and progress to graduate employment. In consideration of these factors, 60% of the graduate earnings figure attributable to the degree programme had been ascribed to the Access Course within the model.

When considering the beneficial effects of the quality assurance mechanisms, other factors became important. For example, it may have been possible for an Access Course to have had strong links with a local higher education institution, thereby mitigating the value of the external quality assurance mechanisms – although had the Access student from a particular Access

Course gone elsewhere following completion of the Access Course, then the 'national currency' of the external quality assurance mechanisms would have been more valuable. Given this, a sizeable percentage of graduate earnings were ascribed to the Access Courses external quality assurance mechanisms. For the purposes of the model a mid-range figure was used (60% of that figure ascribed to the Access Course itself) to reflect the impact of the Access Courses external quality assurance mechanisms upon the eventual earnings of the student. The effect upon the model of using a lower figure is discussed in Chapter 5: Findings.

4.5.2 Providing institution

From the interviews there emerged some 'base' costs and benefits common to all providing institutions and additional local factors. These focused around the factors resulting from the validation/recognition of the Access Course and were explored through secondary data sources such as panel reports, moderation reports, and feedback on AVA forums/open days.

A key purpose of the interviews was to require stakeholders to distinguish between the costs and benefits of the quality assurance mechanisms and those of the course (which the students had been unable to do). Three key factors emerged: recruitment, retention and progression of students, all of which in principle should be improved through the quality assurance process. However, the effect was always mediated by staff and therefore the difference in staff behaviour and performance which resulted from their involvement in the quality assurance arrangements was critical and dependant on two issues: the prior experience of the staff involved and the maturity of their institutions own quality assurance mechanisms. Four scenarios were identified:

1. experienced staff working with new institutional quality assurance mechanisms;
2. inexperienced staff working with new institutional quality assurance mechanisms;
3. experienced staff working with established quality assurance mechanisms;
4. inexperienced staff working with established quality assurance mechanisms.

The scenarios, displayed in Figure 4:5, below indicate that the most benefit would be gained from scenario 2 (new quality assurance mechanisms and inexperienced staff), and the least in scenario 4 (established quality assurance mechanisms and experienced staff).

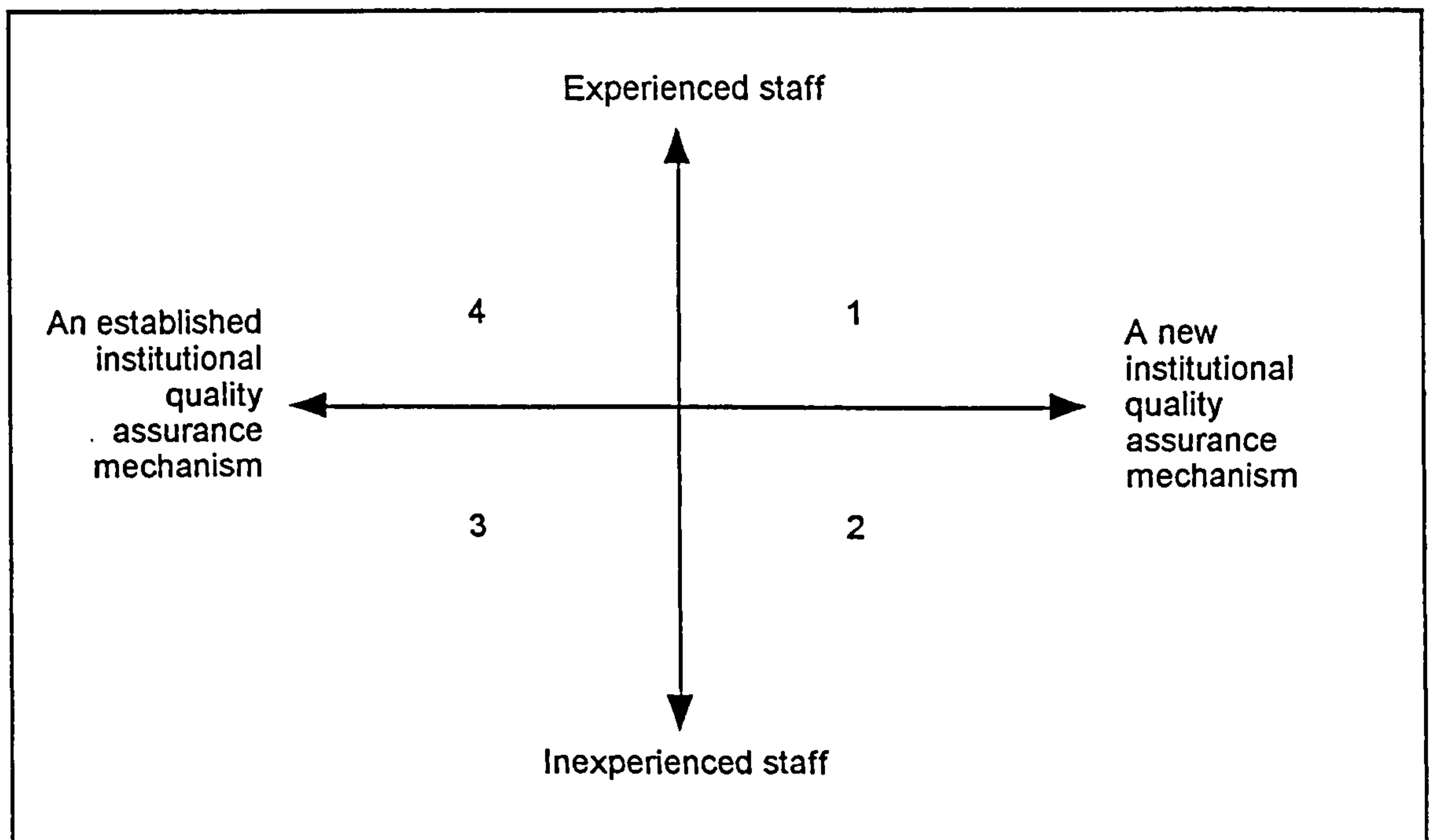


Figure 4:5 Benefit of external quality assurance mechanisms

Key actors in further education (Access Course managers, those knowledgeable in funding matters, Co-ordinators) were consulted to determine appropriate percentage figures for each of the four scenarios and to ensure that the figures used, while problematic, were nevertheless reasonable to those working in the field. These figures were then applied to the model (see Chapter 5: Findings).

Analysis of the panel evaluation forms highlighted that staff/curriculum development benefit was highest following initial involvement - that was during the first panel of 4-5 hours duration – and began to plateau with subsequent 'exposure' to the panel processes⁶. It therefore seemed

⁶ It was noted that panel evaluation forms focused primarily on the panel process (identified earlier, in Chapter 1 - Access education, as one of the three quality assurance areas covered by the AVA). Therefore data gathered from them was tested for reasonableness in interviews.

reasonable to argue that the external quality assurance processes had a limited 'shelf life' as at some point these mechanisms had little or no additional effect on staff and/or curriculum improvement and therefore on recruitment, retention and progression. As a result other benefits would also 'tail/level off'. For example, Access Course tutors who acted as panel members not only provided benefits to the course being proposed but also gained benefits in terms of their own professional development, networking opportunities, and the development of the curriculum of their other courses. Applied to the four scenarios outlined above the benefit was likely to be greatest in scenario 2 (i.e. for staff with the least experience) and least in scenario 4 (i.e. for staff with the most experience). This issue was also put to key actors in the field to determine optimum levels of exposure and then incorporated into the model (see Chapter 5: Findings).

4.5.3 Higher education

Higher education institutions involved with the external quality assurance mechanisms benefited in areas highlighted during the pilot work. These were:

1. recruitment onto their own programmes;
2. professional development of their own staff;
3. mobilising evidence to demonstrate their commitment to widening participation⁷;
4. influence on development of Access programmes;
5. networking opportunities; and
6. influence on retention/achievement rates.

⁷ Some studies (Dearing, 1997; Kennedy, 1997; Fryer, 1997) have assisted funding bodies, through recommendations made, to target funding on programmes of study aimed at widening participation. As a result this benefit area may become more valuable to institutions in the future.

Of the above benefit areas, recruitment generated the most comment. Some queried the value of involvement in the external quality assurance mechanisms upon recruitment onto a particular higher education institution's programmes. The argument that involvement in the quality assurance activities reduced the necessity to conduct pre-entry interviews had been countered by the argument that very few students were actually interviewed for places on programmes of study at higher education institutions (Thompson, 1997). A further complication identified by respondents was the fact that some Access students might have gone to the higher education institution involved in the Access Course's external quality assurance activities irrespective of that involvement. However, in all the case study courses concerned the involvement of the HE actor included appointing a moderator to the Access course who liaised with the providing institution, met with the students and explained typical courses available in higher education institutions. The persuasive nature of this involvement assisted in recruiting onto programmes of study offered by the HE actor. In addition, other factors helped determine the number of Access students from the case study courses enrolled onto programmes offered by the HE actor. These were:

1. the availability of other local choices where mature learners could reasonably progress;
and
2. other HE-type courses available in further education institutions (such as Higher National Diplomas (HNDs) and franchised degree programmes).

As the above factors varied across the case study courses, figures have been used based on the specific case as understood by the key actors in the local situation.

As with the FE providing institutions, the value of these factors depended to a greater or lesser degree on the higher education institutions own quality assurance processes and the level of experience of the staff involved. Six scenarios were identified:

1. Staff experienced in internal (HE) quality assurance;
2. Staff inexperienced in internal (HE) quality assurance;

3. Staff experienced in external (non-advanced) quality assurance (such as BTEC, A levels, Access Courses);
4. Staff inexperienced in external (non-advanced) quality assurance;
5. Staff inexperienced in both internal (HE) quality assurance and external (non-advanced) quality assurance; and
6. Staff experienced in both internal (HE) quality assurance and external (non-advanced) quality assurance.

The hypothesis tested in the field was that the level or value of benefit would be greatest in scenario 5 and least in scenario 6. This being the case general figures were sought from key actors in higher education to determine percentage figures for each of the 6 scenarios and the optimum level of exposure to the external quality assurance mechanisms. These figures were then applied to the model (see Chapter 5: Findings).

The following section describes the model used and explains its construction and method of calculating costs and benefits based on the data gathered through the various methods outlined above.

4.6 The model - data analysis and use

The 'model' used in the research was constructed to reflect 'reality' (Gilbert, 1981) for the case study courses. Effectively this meant the results represented case study courses only. However, because a variety of courses were selected (see above), broad generalisations could be made regarding likely costs and benefits to other Access type provision. Utilising Gilbert's 'imaginary/real world' concept, the model was based on real data from a case study course and had applicability in the other case study courses (Gilbert, 1981: 1-8). This was achieved through taking 'real' data in one case study and using it as a variable, or a factor for calculating a variable, in another case study where that data was unavailable or missing. In addition, validity was added to the model as data from one context or case study course was tested for

reasonableness within others (Gilbert, 1981: 7). An exploratory approach such as this facilitated the development of a model that best fit the data.

The cost-benefit model used had been developed from similar models used primarily in business to determine levels of profit/loss that would occur following specific actions by the decision-makers (see Chapter 3: Economic analysis in education). In keeping with these the model quantitatively analysed relationships between variables in terms of their cost-benefit implications and could similarly be used as a decision support system. A number of variables could be manipulated by the end-user and their effects, in terms of costs and benefits, could be measured and predicted (see Chapter 5: Findings).

The model used the spreadsheet package *QuattroPro 5 (DOS version)* and could be used on any IBM compatible machine. Other popular spreadsheet packages were considered as a base for the model (such as Microsoft Excel, Lotus 1-2-3) but because of familiarity with the package and also that others provided no relevant advantages, QuattroPro was chosen. In addition, the calculation methods used in the model were common across the majority of commercially available spreadsheet packages and therefore, subject to minor modification, the model could be used with any of the above packages.

The factors upon which the model was based were obtained using the various data gathering techniques outlined above. The model focused on the costs and benefits of three key stakeholders: (1) the providing institution, (2) a student; and (3) a higher education institution. The data for each case was based on the case study Access Course providing institution, one student, and one of the higher education routes taken by the students on the Access Course. Tables 4:4 to 4:6 detail the source or informant of each factor within the model. Table 4:7 shows the increments by which the factors were increased at relevant periods during the life span of the model including factors such as the effect on graduate earnings. Tables 4:8, 4:9 and 4:10 show the costs and benefits upon which the model was based. The factors within these tables are relational i.e. variables are inter-related and data changes made within these

tables have an effect on the final cost-benefit figures. How much of an effect would depend on the relative importance of the variable in question (this is discussed further in Chapter 5).

The model has a 10-year life span which was considered a maximum time for an Access Course to run before complete re-working was necessary. The time span when calculating graduate earnings and related factors was set at 20 years to take account of the working lifetime for average individuals (Hough, 1994), and also in consideration of many Access students being mature (i.e. over 21) when embarking on the Access Course.

4.6.1 Variable factors in the model

This section describes the variable factors in the model and also shows the source or informant who provided this information for the model. Section 4.6.2 details the methods used to calculate the data in the case studies.

Providing institution factors

Variable:	Source:
AVA membership	Access Course providing institution – Programme Manager/College Management
Recognition	Access Course providing institution/AVA
Registration/Certification	Access Course providing institution/AVA
Number of staff at panel	Access Course providing institution – Programme Manager/Course Tutor
Panel meeting room	Access Course providing institution – Programme Manager/Course Tutor/College Management
Panel meeting catering	Access Course providing institution – Programme Manager/Course Tutor
Hours at panel	AVA
Number of moderators	AVA
Moderators fee	AVA/ Access Course providing institution – Programme Manager
Average staffing cost per hour	Access Course providing institution – Programme Manager/College Management
Number of course documents	Access Course providing institution – Programme Manager/Course Tutor, AVA
Cost per document	Access Course providing institution - Course Tutor
Teaching staff	Access Course providing institution – Programme Manager/Course Tutor
Hours spent on development (teaching staff)	Access Course providing institution – Programme Manager/Course Tutor

Table 4:4 Providing institution factors – source of data

Variable:	Source:
Student registration fee	Access Course providing institution – Programme Manager/Course Tutor
Administrative staff	Access Course providing institution - Course Tutor
Administrative staff cost per hour	Access Course providing institution - College Management
Hours spent on development (Administrative staff)	Access Course providing institution - Course Tutor
Management staff	Access Course providing institution - College Management/Course Tutor
Management staff cost per hour	Access Course providing institution - College Management/Programme Manager
Hours spent on development (Management staff)	Access Course providing institution - College Management/Course Tutor
Student enrolments	Access Course providing institution - Programme Manager/Course Tutor
Student completions	Access Course providing institution - Course Tutor/Programme Manager
Institutional staffing costs	Access Course providing institution - College Management/Programme Manager, FEFC Inspection Reports
Institutional teaching hours	Access Course providing institution - College Management/Programme Manager, FEFC Inspection Reports
Programme teaching hours	Access Course providing institution - Course Tutor/Programme Manager, AVA
Funding unit price	Access Course providing institution - College Management/Programme Manager, FEFC publications
Total funding units gained	Access Course providing institution - Programme Manager, College Management
Number of fee paying students	Access Course providing institution - Course Tutor/Programme Manager/College Management
Course fee amount	Access Course providing institution - Course Tutor/Programme Manager/College Management

Table 4:4 Providing institution factors (continued) – source of data

Student factors

Variable:	Source:
Course fees	Providing institution, student
Travel (year)	Student
Equipment (year)	Student
Crèche	Student
Travel allowance	Student, Providing institution
Other allowances	Student, Providing institution, DfEE
Graduate earnings	Association of Graduate Recruiters
Course registration fee	Student, Providing institution

Table 4:5 Student factors – source of data

Higher Education factors

Variable:	Source:
AVA membership	HE Access Co-ordinator/Tutor, Moderator, AVA
Number of representatives at panel	HE Access Co-ordinator/Tutor, Moderator, AVA
Average earnings for representatives	HE Access Co-ordinator/Tutor, Moderator
Time spent in preparation and at panel	HE Access Co-ordinator/Tutor, Moderator, AVA
Number of Access students with Access Certificate	HEQC
Time spent moderating	Moderator(s), HE Access Co-ordinator/Tutor, AVA
Students accepted to HE institution	HE Access Co-ordinator/Tutor, Moderator, AVA
Funding per student	HE Access Co-ordinator/Tutor, Moderator, AVA
Moderation fee income	HE Access Co-ordinator/Tutor, Moderator, AVA
National Framework operating costs	HEQC

Table 4:6 Higher Education factors – source of data

4.6.2 Methods used to calculate the data in the case studies

The following section describes how the variables within the model were calculated for the case study courses.

All factors or variables within the model are subject to periodic (usually annual) increments in their value. These increments are displayed in table 4:7 below.

The Increment Table

Increment Table			
AVA membership	2.5%	Panel meeting catering	2.5%
Recognition	2.5%	Hours at Panel	2.5%
Registration/Certification*	2.5%	Number of moderators	0%
Number of reps. (providing institution) at Panel	2.5%	Moderators fee	2.5%
Panel meeting room	2.5%	- Hours spent moderating	2.5%
Average staff earnings (p.a.)	2.5%	Average staffing cost per hour (providing institution)	2.5%
Number of course documents	2.5%	Administrative staff	2.5%
- Cost per document	2.5%	- Administrative cost per hour	2.5%
Teaching staff	2.5%	- Hours spent on development	2.5%
-Hours spent on development	2.5%	Management staff	2.5%
Student registration fee	2.5%	- Management staff cost per hour	2.5%
Student enrolments	2.5%	- Hours spent on development	2.5%
Student completions	2.5%	Funding unit price	2.5%
Institutional staffing costs (p.a.)	2.5%	Funding units gained	2.5%
Institutional teaching hours (p.a.)	2.5%	Number of fee paying students	0%
Programme teaching hours	0%	Course fee amount	0%
Graduate earnings	2.5%	HE funding	2.5%
NPV factor	10%	HE reps. at Panel	0%
% of Access Course earnings attributable to ext quality assurance	60%	HE reps. Earnings per hour	2.5%
% of graduate earnings attributable to Access Course	60%	Students accepted to HE institution	0%
Access students with Certificate	2.5%	National Framework operating costs	2.5%

Table 4:7 Increment table - Case A

*per student

This table forms part of the Decision Support System. It was intended that a user would input increment figures based on their own institutional data. The table below provides increment figures for the variables in the model. Most variables were calculated on yearly increments over 10 years. The graduate earnings variable was calculated over 20 years. It began in year 5 of the model, as this was the first year following graduation from a degree programme. Validation

panel meeting variables such as panel meeting catering and hours at the panel meeting were assigned an increment figure every 5 years, as this was when re-validation of the Access Course usually occurred.

Almost all variables in the model were assigned increment figures of 2.5% to reflect inflationary effects on variables. The following variables were not assigned increment figures as it was assumed (given information provided by providing institutions, AVAs and HE institutions) that these remained fairly static over the lifetime of the model:

- Programme teaching hours
- Number of moderators assigned to the Access Course
- Number of fee paying students
- Course fee amount
- Students accepted to the HE institution

Graduate earnings were assigned a higher increment figure to reflect the increased earnings potential of graduates. It was suggested to the author, and the literature confirmed this, that earnings could be as result of various factors. Therefore graduate earnings attributable to the Access Course and the quality assurance mechanisms of the Access Course were set at 60% of graduate earnings and 60% of that given to the Access Course. These figures were verified as reasonable estimates as to the worth of the Access Course and its quality assurance mechanisms by providing institutions and HE representatives. Factors within the model were calculated every year or re-validation up to the appropriate 10 or 20 year life span. As all of the case study courses were held as being validated every 5 years calculations were made in year 1 and in year 6.

Providing Institution factors

Table 4:8 shows how the providing institution factors were set out in the computer model. These were the variables required to calculate the net benefit for the providing institution of the Access Course and the external (AVA) quality assurance mechanisms.

Providing Institution Factors			
Validation / recognition / moderation			
AVA membership	£0	Panel meeting catering	£75
Recognition	£500	Hours at panel	5
Registration / certification*	£33	Number of moderators	3
Number present at panel	12	Moderators fee	£150
Panel meeting room	£0	Average staff cost/hr**	£80
Course development			
		Administrative staff	1
Number of course documents	15	- Admin. cost per hour	£6
- Cost per document	£2	- Hours spent on development	10
Teaching staff	12	Management staff	4
- Hours spent on development	8.5	- Management cost/hr	£80
Funding			
Student enrolments	45	Funding unit price	£2
Student completions	38	Total funding units gained	3800
Institutional staffing costs (p.a.)	£12m	Number of fee paying students	0
Institutional teaching hours (p.a.)	150000	Course fee amount	£0
Programme teaching hours	799	Institutional overhead costs	£4m

Table 4:8 Providing institution factors - Case A *per student **per panel member

AVA membership The charge to the providing institution for annual membership of the AVA. This figure was divided by the number of Access Courses of the providing institution to provide a membership figure per Access Course (LOCN/W&NYAN) – this could be a ‘free-standing’ Access Course or a specific route within a multi-modular programme. To facilitate comparability across case studies, the number of Access programmes offered by a providing institution consisted of the total number of Access *routes* offered. Therefore, in Case ‘A’ – a large multi-modular programme – the AVA membership amount ‘assigned’ to this course (taken from the total amount charged to the college) was greater than the amount that would have been assigned to a smaller single-discipline Access Course. Where no financial charge was made (HAC case study), the commitments required by the AVA (e.g. staff time, members of staff on panels) were costed out and divided by the number of Access Courses of the providing

institution. One of the W&NYAN case study courses was effectively not charged for membership as this was factored in its recognition and registration/certification costs. This figure had been multiplied by a yearly increment, stated in the Increment Table, over a 10-year period (the Increment Table is discussed later in this chapter).

Recognition The charge made by the AVA for the recognition event (i.e. the panel, development activities etc.) - a fixed cash fee (LOCN/W&NYAN). This covered approximately 5-6 hours assistance from a Development Worker of the AVA covering the development of the programme and feedback to course/programme tutors pre- and post panel. Where there was no fixed fee (HAC case study) this was costed out as the time commitment given by the providing institution's staff to other HAC activities. These included time given to moderating a course and providing a representative at another panel. This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Registration/Certification Charge made by the AVA for registering and providing certification for the student. The charge made was often dependent upon the 'size' of the course and the number of credits a student achieved if the AVA was also a member of the OCN (usually 16 credits for an Access Certificate). This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Number present at panel The number of teaching staff from the providing institution present at the panel meeting *in addition* to those teaching on the programme. These included those Chairing the meeting, other Access Course tutors and less experienced members of staff attending for staff development purposes. This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Panel meeting room The charge made to the providing institution, if any, for the panel meeting room. Usually, this consisted of an overhead element (to cover heating, lighting,

maintenance) and the 'hire' rate for the room. This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Panel meeting catering The charge made, if any, to the providing institution for the panel meeting catering. Usually, this consisted of a per head charge multiplied by the number present at the panel. This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Hours at panel The number of hours spent by the panel members at panel. This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Number of moderators The number of moderators required for the Access Course under consideration. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Moderators fee The fee paid by the providing institution per moderator for moderation of the Access Course. Where no fee is payable (for example, HAC case study) the 'fee element' was covered by the services required by HAC (e.g. staff time) for the moderation activities. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Average staffing cost per hour Two methods of calculating this variable emerged:

1. The total institutional costs (p.a.) divided by the total institutional teaching hours (p.a.). This provided a mechanism for calculating the average teaching costs/hour across the case study courses and was agreed by all the providing institutions as a reasonable and indicative measure of staffing costs. This figure was multiplied by a yearly percentage increment amount over a ten year period; or
2. The average lecturer salary (plus on-costs) divided by the number of contact hours the lecturer was contracted to provide to produce an indicative hourly rate.

Method 1 based its calculations on the whole institutional budget and therefore included overheads such as heating, lighting etc. In addition, as it was an average figure it was not sensitive to differences in delivery or staff/student ratios on different courses. Method 2 does not include these overheads and therefore these elements must be incorporated separately into the model. As a result of its more specific approach to calculation, this method was more sensitive to differences in delivery and staff/student ratios on different courses. Both methods of calculating staffing costs and their effects on the model are explored further in Chapter 5: Findings.

Number of course documents The number of course documents required by the AVA for the recognition event. This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Cost per document The cost to the providing institution of each course document (photocopying, binding). This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Teaching staff The number of teaching staff involved with the development of the course/course document. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Hours spent on development The average number of hours each member of staff spent on developing the course/course document. This included time spent at panel. This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Student registration fee The fee paid by the student to register at the providing institution (this was usually a small amount to cover the issue of identification cards etc.). This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Administrative staff The number of administrative staff required to assist with the development of the course (e.g. typing up course documentation etc.). This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Administrative cost per hour The cost per hour of the administrative staff involved with the quality assurance mechanisms (for example, typing course documents, note taking). This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Hours spent on development The number of hours spent by the administrative staff on preparing the course documentation etc. This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Management staff The number of management staff involved with the development of the course. This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Management staff cost per hour The cost per hour of the management staff. There was wide disagreement among respondents about how this figure should be calculated and therefore the figure used in the model was the same as 'average staff cost'. Individual users of the model could of course insert a specific figure relevant to their own situation. This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Hours spent on development The average number of hours management spent on development of the course. This included time spent at panel. This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Student enrolments Number of students enrolled on the course. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Student completions Number of students completing the Access Course and receiving their certificate. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Institutional staffing costs The total cost of teaching staff in the providing institution for the year. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Institutional teaching hours The total teaching hours of the providing institution for the year. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Programme teaching hours The teaching hours for the case study Access Course programme. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Funding unit price The FEFC unit of funding given to the providing institution. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Total funding units gained The total number of funding units gained for the Access Course for the year. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Number of fee-paying students The number of fee-paying students on the case study Access Course. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Course fee amount The fee amount charged to the Access students paying fees. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Institutional overhead costs The total of all costs, other than teaching, associated with the operation of the college for the year. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Student factors:

(based on a sample student from one of the case study courses – Case A)

Student Factors			
Course fees	£0	Travel allowance	£0
Travel (per year)	£122.40	Other allowances (Income Support)	£1,229
Equipment (per year)	£50	Graduate earnings	£16,725
Crèche (per year)	£204	Course registration fee	£0

Table 4:9 Student factors - Case A

Course fees The fee amount charged by the providing institution to the average Access student paying fees.

Course registration fee The fee paid by the student to register at the providing institution (this was usually a small amount to cover the issue of identification cards etc.).

Travel (per year) The amount spent by the average student on travel to study on the Access Course.

Equipment (per year) The amount spent by the average Access student on equipment for their studies (books, paper etc.).

Crèche (per year) The amount spent by the average Access student on crèche facilities to enable them to study.

Travel allowance The amount given to the average Access student (in the form of an LEA grant) to enable them to travel to and from the Access Course providing institution.

Other allowances Any other allowance or benefit the average student might receive whilst on the Access Course that was as a result of study.

Graduate earnings The earnings a graduate would receive following an Access Course and a degree programme. A percentage of this figure was then attributed to the Access Course, and a further percentage attributed to the external quality assurance mechanisms (see Table 4:7 Increment Table). The figure chosen was a percentage amount based on the values given by the various actors consulted in the research. A recent study stated current graduate earnings, in the first year following graduation, to be within a range of £13,800 to £20,040 (Association of Graduate Recruiters, 1997). To take into consideration inflationary effects on earnings an approximate, mid-range figure of £16,725 was used in the model as a basis for graduate earnings. The flexibility of the model allowed for this to be changed. This figure was multiplied by a yearly percentage increment, following graduation in year 5, over an average working lifetime (20 years).

Higher Education factors

Higher Education factors			
AVA membership	£200	Time spent moderating (hours)	12
Number of reps. at panel	1	Students accepted to HE institution	13
Average earnings/hr for reps.	£60	Funding per student	£2,200
Time spent at panel (hours)	5	Moderation fee income	£150
Time spent in preparation for panel (hours)	1.5	National Framework operating costs	£100,000

Table 4:10 Higher Education Factors - Case A

AVA membership The financial charge to the institution for membership of the AVA. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Number of representatives at panel The number of the Higher Education institution's staff at the panel. This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Average earnings per hour for reps. Two methods of calculating this variable emerged:

- (1) The average hourly salary (including on-costs such as pension contributions, NI payments) for the Higher Education representatives; or
- (2) The cost of covering the HEI member of staff converted to an hourly equivalent.

This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Time at panel The time spent by the panel members at the panel. This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Time spent in preparation for the panel The time spent reading and preparing for the panel. This figure was multiplied by a percentage increment amount every time the course was timetabled for re-validation (every 5 years).

Number of Access students with Access Certificate The number of Access students obtaining Access Certificates in the year. This figure was used to determine the cost per student achieving the Access Certificate within the National Framework (see 'National Framework operating costs' below). This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Time spent moderating The time spent by the Higher Education staff members moderating. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Students accepted to HE institution The number of students from the case study Access Course accepted to the Higher Education institution. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

Funding per student The amount of funding received per student accepted from the case study course. This was an average amount as the funding amount differed depending on the type of HE course the student was enrolled on. This figure was multiplied by a yearly percentage increment amount over a ten-year period. This was included as a benefit within the model as the additional students generated as a result of the HEI's participation in the quality assurance mechanisms incurred only marginal additional teaching costs. However, individual users of the model could alter this variable to take into account other associated costs of teaching these students.

Moderation fee income The fee income from moderation activities carried out by members of staff. In some cases (W&NYAN) this income was paid to the HEI, in others (LOCN) this was paid to the individual. Where the fee was paid to the individual, the model assumes no moderation fee income benefit for the HEI. This figure was multiplied by a yearly percentage increment amount over a ten-year period.

National Framework operating costs The operating costs for the National Framework for the recognition of Access Courses (£100,000). This provided – when divided by the total number of Access students with an Access Certificate (20,489 Higher Education Quality Council, 1994)) – the cost of the national framework per Access student (£4.88). This figure was then multiplied by the number of Access students accepted to the HE institution from the case study Access Course ($£4.88 \times 13 = £63.44$). This figure was multiplied by a yearly percentage increment amount over a ten-year period. The operating cost figure was given to the author through a personal communication with Dr Philip Jones (Assistant Director, Quality Assurance, HEQC) in 1996. It was based on a notional operating cost of £100,000 per year.

The life of the model

The model was constructed to calculate the cost and benefit factors that would accrue over a reasonable timespan. For the HE actor and providing institution this was set at 10 years. At the end of this period it was reasonable to assume the Access Course would need substantial re-

working/re-development in order for it to maintain its role as an appropriate preparation for HE-type provision.

A 20-year timespan was constructed within the model for the students as this reflected the average working lifetime of an individual and took account of their age upon eventual entry into the labour market. However, it was acknowledged that some Access students might return to education later than others and might therefore have a shorter working lifetime following degree study. The model would accept a shorter working lifetime variable for such individuals, the effects of this are discussed in Chapter 5: Findings.

The following tables (4:11 to 4:14), provided as examples, detail the variables and their associated incremental effects on the value of those variables for case study A. The Increment Chart (table 4:11) provides typical figures resulting from the periodic increments. In addition the charts are abridged versions of the complete spreadsheets. Complete spreadsheets, relating to each case study course, are contained in Appendix 5: The model.

Case A: Increment chart									
	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	
Number of representatives (providing institution) at panel %									
Moderators % (1)	3	3	3	3	3	3	3	3	3
Moderators fee %	153.75	157.59	161.53	165.57	169.71	173.95	178.30	182.76	
Hours spent on moderation %	12.30	12.61	12.92	13.25	13.58	13.92	14.26	14.62	
Course documents %					15.38				
Course documents price %					2.05				
Teaching staff %					12.30				
Hours spent on development %					8.71				
Average earnings per hour %					82.00				
Administrative staff %					1.03				
Administrative cost per hour %					6.15				
Hours spent on development (admin) %					10.25				
Management staff %					3.08				
Management cost per hour %					82.00				
Hours spent on development (management) %					4.10				
Programme teaching hours %	799.00	799.00	799.00	799.00	799.00	799.00	799.00	799.00	
Staff costs %	12,300,000.00	12,607,500.00	12,922,687.50	13,245,754.69	13,576,898.55	13,916,321.02	14,264,229.04	14,620,834.77	
Teaching hours %	153,750.00	157,593.75	161,533.59	165,571.93	169,711.23	173,954.01	178,302.86	182,760.43	
Overheads %	4,100,000.00	4,202,500.00	4,307,562.50	4,415,251.56	4,525,632.85	4,638,773.67	4,754,743.01	4,873,611.59	
Student registration fee %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Enrolments %	46.13	47.28	48.47	49.68	50.92	52.19	53.50	54.83	
Funding unit price %	20.50	21.01	21.54	22.08	22.63	23.19	23.77	24.37	
Funding units %	3,895.00	3,992.38	4,092.18	4,194.49	4,299.35	4,406.83	4,517.01	4,629.93	
Course fee %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fee payers %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Hours at panel %					5.13				
HE representatives earnings per hour %	61.50	63.04	64.61	66.23	67.88	69.58	71.32	73.10	
HE representatives at panel %	1	1	1	1	1	1	1	1	
Students at HE institution %	13	13	13	13	13	13	13	13	
HE funding per student %	2,255.00	2,311.38	2,369.16	2,428.39	2,489.10	2,551.33	2,615.11	2,680.49	
Graduate earnings %	0.00	0.00	0.00	0.00	17,143.00	17,571.58	18,010.86	18,461.14	
Registration/Certification %	33.83	34.68	35.54	36.43	37.34	38.28	39.23	40.21	
Access students with certificate %	21,001.00	21,526.03	22,064.18	22,615.78	23,181.17	23,760.70	24,354.72	24,963.59	
National Framework operating costs %	102,500.00	105,062.50	107,689.06	110,381.29	113,140.82	115,969.34	118,868.58	121,840.29	

Figure 4:11 Increment chart – Case 'A'

Case A: Cost and Benefit calculations (Providing Institution)										
Factor	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Access Course Costs:										
Course Provision	£ 63,920	£ 63,920	£ 63,920	£ 63,920	£ 63,920	£ 63,920	£ 63,920	£ 63,920	£ 63,920	£ 63,920
Overheads	£ 21,307	£ 21,840	£ 22,386	£ 22,945	£ 23,519	£ 24,107	£ 24,710	£ 25,327	£ 25,961	£ 26,610
Access Course Benefits:										
Funding	£ 76,000	£ 79,848	£ 83,890	£ 88,137	£ 92,599	£ 97,286	£ 102,212	£ 107,386	£ 112,822	£ 118,534
Fees	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Registration	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Net Benefit: Access Course	£ 9,227	£ 5,912	£ 2,416	£ 1,272	£ 5,160	£ 9,259	£ 13,582	£ 18,139	£ 22,941	£ 28,004
Discounting ratio	1	0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51316	0.46651	0.42410
Discounted Net Benefit: Access Course	£ 9,227	£ 5,374	£ 1,996	£ 955	£ 3,524	£ 5,749	£ 7,667	£ 9,308	£ 10,702	£ 11,877
Net Present Value: Access Course	£ 33,185									
Quality Assurance mechanisms Costs:										
AVA membership	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Recognition	£ 500					£ 513				
Registration/Certification	£ 1,485	£ 1,560	£ 1,639	£ 1,722	£ 1,809	£ 1,901	£ 1,997	£ 2,098	£ 2,204	£ 2,316
Number present at panel	12					12				
Panel staffing	£ 4,800					£ 5,169				
Panel meeting room	£ -					£ -				
Panel meeting catering	£ 75					£ 77				
Hours at panel	5					5				
Moderators fee	£ 450	£ 461	£ 473	£ 485	£ 497	£ 509	£ 522	£ 535	£ 548	£ 562
Course documentation	£ 30					£ 32				
Teaching staff (development)	£ 8,160					£ 8,787				
Administrative staff (development)	£ 60					£ 65				
Management costs (development)	£ 960					£ 1,034				
Quality Assurance mechanisms Benefits:										
Net Benefit: Quality Assurance mechanisms	£ 16,520	£ 2,021	£ 2,112	£ 2,207	£ 2,306	£ 2,408	£ 2,519	£ 2,633	£ 2,752	£ 2,878
Discounting ratio	1	0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51316	0.46651	0.42410
Discounted Net Benefit: Quality Assurance mechanisms	£ 16,520	£ 1,837	£ 1,745	£ 1,658	£ 1,575	£ 1,491	£ 1,422	£ 1,351	£ 1,284	£ 1,221
Net Present Value: Quality Assurance mechanisms	£ 39,844									

Net Benefit: Access Course = Net Benefit of Access Course (benefit - cost)
 Discounting ratio = 10%
 Discounted Net Benefit: Access Course = Net Benefit of Access Course x Discount ratio
 Net Present Value: Access course = sum of discounted net benefits

Net Benefit: Quality Assurance mechs. = Net Benefit of Quality Assurance procedures (benefit - cost)
 Discounting ratio = 10%
 Discounted Net Benefit: Quality Assurance mechanisms = Net Benefit of QA x Discount ratio
 Net Present Value: Quality Assurance mechanisms = sum of discounted net benefits

Figure 4:12 Cost-benefit calculations (Providing institution) – Case 'A'

Case A: Cost and Benefit calculations (Students)										
Factor	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Access Course Costs:										
Course Fees	£ -									
Course registration fee	£ -									
Travel	£ 122									
Equipment	£ 50									
Crèche	£ 204									
Access Course Benefits:										
Travel allowances	£ -									
Other allowances	£ 1,229									
Percentage of graduate earnings	£ -				£ 10,035	£ 10,286	£ 10,543	£ 10,807	£ 11,077	£ 11,354
Net Benefit: Access Course	£ 853				£ 10,035	£ 10,286	£ 10,543	£ 10,807	£ 11,077	£ 11,354
Discounting ratio	1	0.909091	0.826446	0.751315	0.68301346	0.62092132	0.56447393	0.51315812	0.46650738	0.42409762
Discounted Net Benefit: Access Course	853	0	0	0	6854.04002	6386.71911	5951.26099	5545.4932	5167.39139	4815.06925
Net Present Value: Access Course	£ 68,902									
Quality Assurance mechanisms Costs:										
Quality Assurance mechanisms Benefits:										
Percentage of graduate earnings attributable to the Access Course					£ 6,021	£ 6,172	£ 6,326	£ 6,484	£ 6,646	£ 6,812
Net Benefit: Quality Assurance mechanisms					£ 6,021	£ 6,172	£ 6,326	£ 6,484	£ 6,646	£ 6,812
Discounting ratio	1	0.909091	0.826446	0.751315	0.68301346	0.62092132	0.56447393	0.51315812	0.46650738	0.42409762
Discounted Net Benefit: Quality Assurance mechanisms	£ -	£ -	£ -	£ -	£ 4,112	£ 3,832	£ 3,571	£ 3,327	£ 3,100	£ 2,889
Net Present Value: Quality Assurance mechanisms	£ 40,829									

Net Benefit: Access Course = Net Benefit of Access Course (benefit - cost)
Discounting ratio = 10%

Discounted Net Benefit: Access Course = Net Benefit of Access Course x Discount ratio
Net Present Value: Access course = sum of discounted net benefits

Net Benefit: Quality Assurance mechs. = Net Benefit of Quality Assurance procedures (benefit - cost)
Discounting ratio = 10%

Discounted Net Benefit: Quality Assurance mechanisms = Net Benefit of QA x Discount ratio
Net Present Value: Quality Assurance mechanisms = sum of discounted net benefits

Figure 4:13 Cost-benefit calculations (Students) – Case 'A'

Case A: Cost and Benefit calculations (Higher Education Institution)										
Factor	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Quality Assurance mechanisms Costs:										
AVA membership	£ 200	£ 205	£ 210	£ 215	£ 221	£ 226	£ 232	£ 238	£ 244	£ 250
Number of representatives at panel	1									
Average earnings per hour for representatives	£ 60	£ 62	£ 63	£ 65	£ 66	£ 68	£ 70	£ 71	£ 73	£ 75
Time at panel	5					5				
Time spent in preparation and at panel	£ 390					£ 348				
Time moderating	£ 720	£ 756	£ 795	£ 835	£ 877	£ 922	£ 968	£ 1,017	£ 1,069	£ 1,123
National framework	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45
Quality Assurance mechanisms Benefits:										
Funding for students accepted	£ 28,600	£ 29,315	£ 30,048	£ 30,799	£ 31,569	£ 32,358	£ 33,167	£ 33,996	£ 34,846	£ 35,717
Moderation expenses	£ 150	£ 154	£ 158	£ 162	£ 166	£ 170	£ 174	£ 178	£ 183	£ 187
Net Benefit: Quality Assurance mechanisms	£ 27,377	£ 28,444	£ 29,137	£ 29,847	£ 30,573	£ 30,968	£ 32,078	£ 32,857	£ 33,653	£ 34,469
Discounting ratio	1	0.90909091	0.82644628	0.7513148	0.68301346	0.62092132	0.56447393	0.51315812	0.46650738	0.42409762
Discounted Net Benefit: Quality Assurance mechanisms	£ 27,377	£ 25,858	£ 24,080	£ 22,424	£ 20,882	£ 19,229	£ 18,107	£ 16,861	£ 15,699	£ 14,618
Net Present Value: Quality Assurance mechanisms	£ 205,098									

Net Benefit: Quality Assurance mechs. = Net Benefit of Quality Assurance procedures (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Quality Assurance mechanisms = Net Benefit of QA x Discount ratio

Net Present Value: Quality Assurance mechanisms = sum of discounted net benefits

Figure 4:14 Cost-benefit calculations (Higher education) – Case 'A'

Chapter 5

5. Findings

As detailed in Chapter 4 there were numerous actors or stakeholders who attracted costs and benefits as a result of the quality assurance procedures initiated by AVAs (Wilkinson, 1997).

As a result of the iterative nature of the research the cost-benefit model was developed from the initial case 'A' course to accommodate differences in cases 'B', 'C' and 'D'. This assisted the development of a model capable of application across, not only, widely different Access Courses but also across different quality assurance arrangements.

Generally, the cost and benefit components of the quality assurance processes were self-explanatory and straightforward; consisting in the main of values for services provided through attendance at the panel or related activities. Some elements such as programme development which included administration and management for programme development took into account the time commitment made whilst at the panel. Other 'independent' panel members i.e. those not associated with the providing institution or a higher education institution incurred a cost of time (plus travel expenses) spent at the panel. The number of hours was relatively easy to calculate as the AVA involved produced a panel report that indicated the time spent at panel. However, there was an additional element here - the amount of time spent *preparing* for the panel. Before a course came to panel its documents were circulated to the panel members and they were requested to read these documents prior to attending the meeting. Therefore some preparation time should also factor in the 'time' cost.

The calculation of the hourly rate was more problematic. If 3 hours were spent at the panel and 1 hour, say, spent on preparation how should this time element be converted into a financial cost? A value could be produced by calculating the panel member's hourly salary by the time spent at the panel and preparing for it. For example, one Access Course tutor stated in an interview that one panel member, who is a lecturer in an FE college, may have an hourly salary equivalent of £25 per hour (plus any on-costs), therefore giving a notional cost for the panel

process of $\text{£}25 \times (3 + 1 \text{ hours}) = \text{£}100$. However, the distinction between actual and notional costs was important here (Drummond *et al*, 1987; Mishan, 1988; Fielden & Pearson, 1989). Notional costs can only become actual if the FE lecturer was employed *at the time* of the panel doing something else (teaching, marking, administration, or managing). Therefore, while the *notional* cost of a large panel meeting with, say, 20 members might be quite high, the *actual* cost might be lower as the panel members were present during their 'free' time - they would not normally be teaching or employed elsewhere during the panel. Many staff argued that this, in fact, was what happened - others applied 'cover costs' - which was the cost of replacing that member of staff whilst they were attending a panel meeting. Phelps (1996) drawing on other related work threw some light on the subject of placing a value on 'free time' by stating: '*it is economists' convention to value personal time at a substantially lower rate (half the wage rate being typical)*' (Phelps, 1996: 7). This would provide a reduced notional cost to the panel member of $\text{£}12.50 \times (3 + 1 \text{ hour preparation}) = \text{£}50$. Also, the time spent at panel might be seen as an investment by the staff member concerned as an investment in their own professional development rather than a personal cost. The flexibility of the model allowed the above various positions on the cost of time at the panel to be input by the user. The effects of changes made to the cost of time at panel are discussed later in this chapter (see 5.2.1 – Sensitivity analysis). All case study contacts agreed that it would be reasonable to 'cost out' the time spent at the panel meeting by multiplying it by the hourly salary of the panel member concerned or by dividing the total institutional operating costs for the year by the number of institutional teaching hours to provide an indicative hourly rate.

Of the three stages involved in Access Course validation (course development, panel processes, and post-panel activities), HEI involvement usually occurred in the panel process and post-panel stages. The level of participation/involvement a HEI had in these activities could vary across AVAs. It might even vary within the institutions depending on such factors as the size of the validating agency, the links between the validating agency and the HEI, and the links between the HEI and the Access Course providing institution.

Influence of key personnel (Admissions Tutors, Head of Department) tended to dictate the level of any extra involvement a university gave up to the Access Course validation through the activities of the AVA. This was over and above any notional financial commitment all HEIs provided to HEQC for the operation of the National Framework. The financial commitment was broadly equivalent to the notional budget for the Access Courses Recognition Sub-group (ACRG) divided by the number of contributing HEIs ($\pounds 100,000 / 150 = \pounds 667$)¹ - irrespective of the HEIs desire to involve itself further with Access Course validation procedures.

The costs of participation in the external quality assurance mechanisms consisted of the staff time given up to the quality assurance activities. In the main, this was split between attendance at panel meetings and moderation activities. For example, in Case A the time commitment consisted of 5 hours at panel and three half day visits (of four hours each) for moderation purposes - a total of 17 hours for the year. This effort produced a return for the HEI of 13 students in year 1. The net benefit of this level of participation in the quality assurance mechanisms was the number of hours given up multiplied by the hourly salary (plus on-costs or the cost of cover hourly equivalent). This figure was then set against moderator fee income (£150 per year) and the number of Access students entering the HEI from the case study Access Course multiplied by the fee income the students generate (i.e. the net benefit was the benefit minus costs). However, other factors, such as the costs of teaching these learners, might lessen or 'cancel out' this net benefit figure. It may also have been the case that the students from the Access Course enrolling at the HEI might have joined irrespective of its involvement with the Access Course and its associated quality assurance mechanisms. If this were the case the return of students for the HEI would be reduced. For example, 10 students might have enrolled on the course anyway, and the remaining 3 enrolled as a result of their contact (through the quality assurance mechanisms - e.g. meeting and discussing their HE requirements with the moderator) with the HEI. At the time, data was fragmentary that distinguishes between these 2 groupings and therefore all students entering the HEI from the Access Course were classified as a benefit of the quality assurance mechanisms for the HEI. Although other routes were subsequently available facilitating entry into HE for the traditionally

¹ Figure provided through a personal communication with the late Dr Philip Jones – Assistant Director (Quality Assurance), HEQC, April 1996.

disadvantaged, the view was taken that but for the Access Course and its linked quality assurance mechanisms – which included HEI involvement – these students would not progress to HE (degree) programmes of study. Although all students were classified as a benefit of the quality assurance mechanisms, the model could accommodate adjustments to this variable.

The student data also consisted of straightforward transactions - such as the 'cost' of course fees and travel. However, as one of the purposes of education is to increase the earning power of those who are educated, it was possible to establish a 'benefit' figure that was a result of education received (Psacharopoulos, 1985). However, this 'benefit' was usually attributed (see for example Woodhall, 1992; Psacharopoulos, 1985) to higher education i.e. a degree of some sort – whether this benefit could be attributable to an Access Course was questionable. Of course, at least some of the benefit was attributable to the student having experienced an Access Course – developing interpersonal skills, for example, that would be put to use in subsequent education. However, the literature suggested that this decreased with time and by far the most 'employable' factor was that the student had graduated from a degree programme. On the other hand, it might be argued that a greater proportion of the benefit should be attributable to the Access Course because if the student had not studied on an Access programme they would not have gone into higher education at all and, therefore, would not have achieved the increased earnings associated with graduates. The amount of earnings to be attributed to the Access Course was thus problematic and contested. When attention was focused on the quality assurance arrangements, a further layer of complexity was added. The key question then became how much of the benefit - in this case increased earnings - was attributable to the Access Course and how much to the quality assurance arrangements? It could be argued, for example, that the quality assurance arrangements mean the students have a better chance of successfully completing the course or of obtaining a place in higher education, and therefore achieving graduate earnings. However, the first step was to calculate the increased earnings attributable to the course itself.

In order to attribute some of the benefit of increased earnings for a cohort of students, the percentage that progress onto higher education and employment following higher education had to be established. Although some work had been done on completion and progression

rates into higher education (Osborne & Gallacher, 1994) these could vary from around 30 to 70% (Capizzi, 1996). If progression rates were available for a particular course these could be inserted in the example decision tree shown in Figure 5:1. This 'tree' highlights other areas for consideration, such as those students who do not enter HE but enter employment or begin training programmes. Other issues that emerged here included the fact that there might be a number of students on Access Courses studying purely for the enjoyment of it and who did not progress to HE study and therefore graduate status because they chose not to. As a result of these variables the graduate earnings benefit figure for the whole cohort in the model could be reduced. However, would this be a distortion of the situation? Are there other benefits associated with withdrawal that should have been included? Additionally, what should have been done about the students who studied only part of the Access Course and decided to complete it later on in their life when other commitments allowed? The same applied to those who *did* complete the course but other commitments prevented them, at that particular time, from entering higher education. Therefore, in the absence of large-scale definitive national data, the model calculated the costs and benefits for a typical student from the case study course. The assumption had been made that the Access student in the model would achieve graduate employment, although it was possible to remove this element from the calculations.

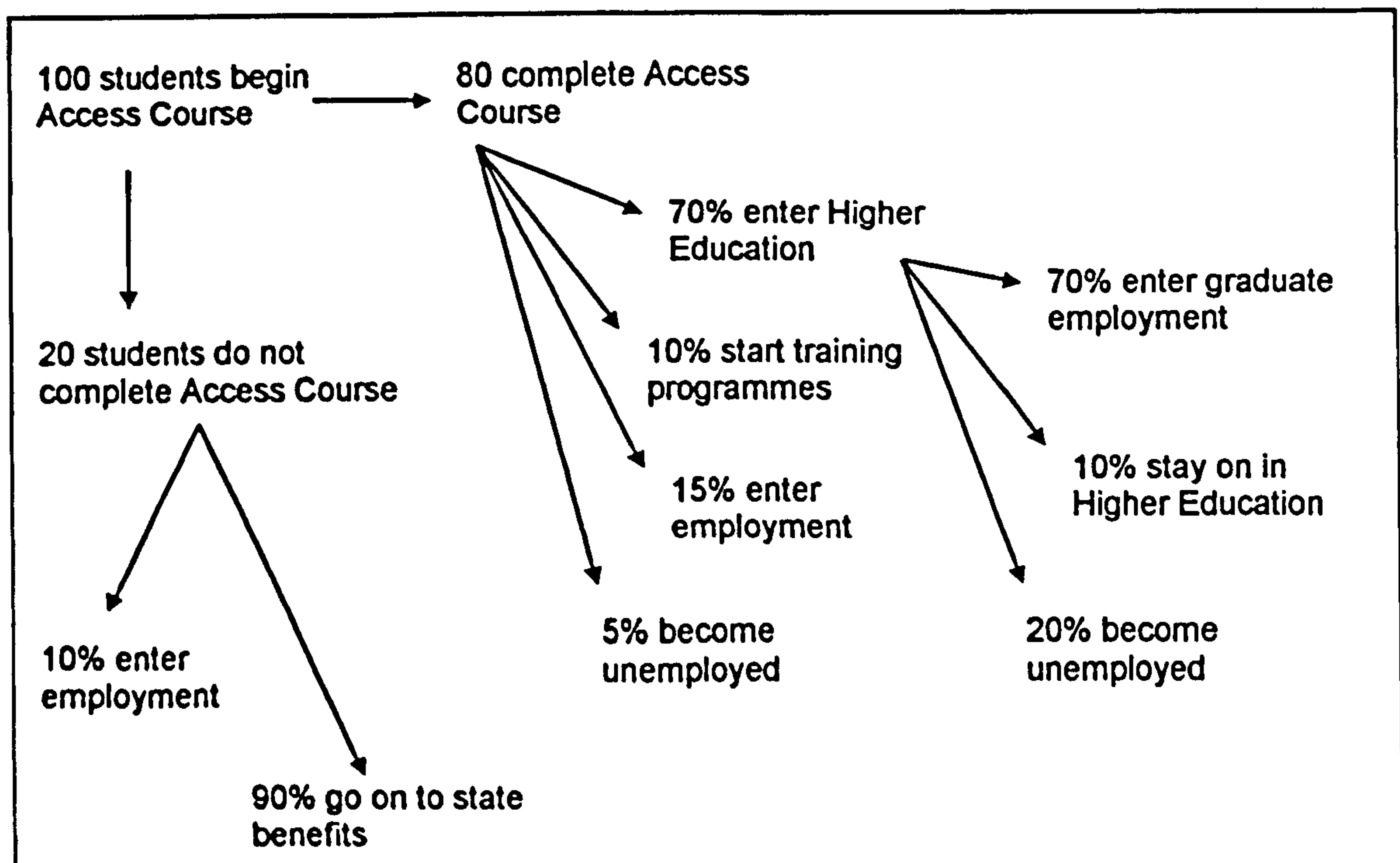


Figure 5:1 Example Access Course decision tree

The above questions required specific data that track Access students from enrolment onwards (into higher education, employment, unemployment, other training programmes etc) in order that generalisable claims of financial benefit could be made and usefully incorporated into any cost-benefit model. While a generalised model requires data on progression based on large-scale information to facilitate the data being representative of all courses, for a cost-benefit analysis of a particular course - the specific data known to the providing institution and/or the AVA and HEI could be used. Examples of typical rates of return for those studying Access programmes, as shown in Figure 5:1, above, are produced later in this chapter (see section 5.2.1 Sensitivity analysis). These examples highlight further the complexity of measuring the benefit, in terms of potential earnings, for students of Access Courses.

Although a benefit figure could be obtained for graduates (by subtracting the per annum income figure for non-graduates from that for graduates) - even this, seemingly easy task had its difficulties. To establish the benefit of increased earnings of graduates against non-graduates required, ideally, that the incomes of the two groups be analysed over their respective working lifetimes. This was practically impossible, as it would require approximately 40 years of data for any useful comparisons to be made. Therefore, to address this problem, economists have developed 'age earnings profiles' to establish representative figures of earnings. These rely on cross-section data; i.e. snapshot evidence of cross-sections of society at one moment in time. To be reasonably representative in this exercise an element known as the 'alpha coefficient' (Hough, 1994) or 'ability coefficient' was often included. This coefficient was the adjustment made to account for differences in incomes attributable to factors other than education, such as innate ability, personality, favourable home background and social class. Denison (1964) suggested that 66% of the difference was attributable to education (a coefficient of 0.66) although it was based on US men only (Hough, 1994). Work done elsewhere suggested that a coefficient of around 0.6 to 0.8 might be more appropriate (Psacharopoulos, 1985; Blundell et al, 1997; Steel & Sausman, 1997) although clearly this would vary across countries due to differences in education systems and labour market conditions.

A problem of using cross-section data was that although the alpha-coefficient ironed out factors other than education affecting income, it did not take account of changes in the economy.

These could include changes in demand and supply of educated people, and the effects of trends over time – such as changes in the rate of economic growth. With reference to the latter, Becker (1974) (in the USA) suggested adding the annual expected increase in real income per head and Ziderman (1977) in his work in the UK added a 'conservative' 2% per annum to all incomes. This was a technique Blaug *et al* (1969) used in their work in India. Although such a technique took into account the environment in which the educated lived, to add a fixed percentage adjustment in this way assumed that income differentials would remain constant over a period of some 40 years, which could appear unlikely (Hough, 1987).

Past studies also indicated that a further layer of complexity arose from different forms of education, which appeared to have different rates of return. For example workers with agricultural education earned 28.3% less and workers with technical education earned 6.6% less than workers with general qualifications. It was also suggested that other types of education were not rewarded significantly differently from general education (Groot, 1994). This had implications for the calculation of benefits to students graduating and finding employment. In addition Access Course students were not 'average' students as the courses themselves were specifically targeted at disadvantaged groups such as ethnic minorities and mature learners who may have experienced different rates of return than those outlined above (Davies, 1994). Additionally, as Access students were generally older than students from A-level routes it might have been the case that mature graduates would have had fewer years' employment after graduation than traditional (21-year-old) graduates. However, the age discrepancy between the two groups might not be as wide as had previously been the case. A study by Steel and Sausman found that 77% of those entering full-time degree programmes were under 21, and the following 14% were under 30 (Steel & Sausman, 1997: 8).

Following consideration of the above, it was the general consensus of those involved with the research (HEIs, providing institutions, moderators, AVA and HEQC representatives) that 60% of the salary figure ascribed to the Degree programme was as a result of the student completing an Access Course (this took into consideration the coefficient figures indicated above of between 0.6 and 0.8). Based upon this it was further stated by key actors involved with the research that at least 60% of the figure ascribed to the Access Course could

reasonably be ascribed to the external quality assurance mechanisms of the Access Course. Reasons for such a large percentage of graduate income being attributable to Access Course study focused upon the 'disadvantaged' nature of Access students and the importance placed upon the Access Course in providing a route into higher education – and beyond to graduate employment. However, as Access students were seen as typically disadvantaged this could have an effect on their eventual earnings and they could enter graduate employment at the lower end of the salary scale and/or progress from higher education study into lower paid professions. Therefore, as a result of the variable nature of the eventual earnings – compounded by additional factors for Access students – the model enabled the earnings figure to be amended.

5.1 Costs and benefit factors

The cost and benefit factors established through the various methods employed in the research (see Chapter 4: Methods) are detailed in the following tables and relate to the three stakeholder groups: the Access Course providing institution, the Access student, and the higher education institution. They were based on data received from the actors concerned (Access Course Co-ordinators/managers, Access Course students, HE admissions tutors/managers etc) and their method of calculation has been explained in Chapter 4. The value of figures within the model increased by a reasonable 2.5% per annum in consideration of the effects of inflation upon the figures. For example, in year 1 AVA membership may have been £500 and in year 2 this increased to £513. The model had a set life-span of 10 years, therefore figures were calculated up to and including year 10 (except in the case of graduate earnings for students - where a 20 year life-span was adopted to reasonably reflect a student's working lifetime (Hough, 1994)². All calculations were discounted to present value using a discount factor of 10%.

² It is acknowledged that some forecasts of supply and demand for graduates put forward that not all students may achieve an income typically associated with graduate status (Steel & Sausman, 1997).

For almost all stakeholders in the case studies, the internal rate of return (IRR) was not calculated. As discussed in Chapter 3: Economic analysis in education, the IRR relates to the rate of return for a given investment. It relies for its accurate calculation on a number of cashflows over a series of years. The IRR is the interest rate received for an investment consisting of payments (negative values) and income (positive values). In almost every case study scenario the payments (negative values) were either cancelled out each year by the income (positive values) or the payments cancelled out the benefits each year for the duration of the model. Calculating the IRR based on cashflows such as these did not provide meaningful results. However, data provided by the student in case study 'D' showed positive and negative cashflows, as a result of earnings foregone whilst undertaking the Access Course. An analysis of the cashflows over the lifetime of the model produced an IRR for the student of 76%. The IRR figure was based upon the cost/benefit figure of the Access Course – the cost/benefit figure of the quality assurance mechanisms was not included in the calculation of the internal rate of return as there were no negative values present. In addition, the benefit figure for quality assurance was drawn from that ascribed to the Access Course so to include it here would involve double-counting the graduate earnings figure. Section 5.2.1 – Sensitivity analysis, provides comparable examples of where the model has been used to calculate IRRs for other non-case study learners. These examples have been drawn from a number of students from different disciplines.

Case studies

It is important to note that the following figures are those of the case study courses concerned and have been verified by the actors concerned as reasonable reflections of actual figures. This should be borne in mind where apparent discrepancies occur between cases - for example in programme development. Full details of calculations relating to the four case studies are supplied as Appendix 5: The Model. Generally, the net cost or benefit figure for the three key stakeholder groups was calculated by subtracting the quantifiable quality assurance mechanism costs from the quantifiable quality assurance mechanism benefits. The analysis provided that quality assurance mechanism costs were more quantifiable than benefit factors, which were more qualitative in nature. However, an attempt has been made later in this chapter to accommodate the more qualitative factors into the model.

Providing institution: Net Cost/Benefit QA mechanisms

The net cost or benefit figure for the providing institution in relation to the external quality assurance mechanisms based on a 10 year life-span brought to present value using the discount rate of 10% (see Chapter 3: Economic analysis in education). The quality assurance mechanism cost factors upon which the net benefit figure was calculated were identified as:

- AVA membership
- Recognition
- Panel staffing
- Panel meeting room
- Panel meeting catering
- Hours spent at the panel meeting
- Moderators fee
- Course document production costs
- Teaching staff course development costs
- Administrative staff course development costs
- Management staff course development costs

Providing institution: Net Cost/Benefit Access Course

The net cost or benefit figure for the providing institution in relation to the Access Course. This figure has been calculated by subtracting the quantifiable Access Course costs from the quantifiable Access Course benefits. The factors upon which the net benefit figure was calculated were identified as:

- Course provision costs
- Funding amount benefit
- Fee income benefit
- Registration fee income benefit

Student: Net Cost/Benefit QA mechanisms

The benefit amount to the student of the external quality assurance mechanisms based on a 20-year life span brought back to present value using the discount rate of 10%. The analysis provided that only quality assurance mechanism benefits were included as no visible quantifiable quality assurance mechanism costs emerged. The quality assurance mechanism benefit figure consisted of a percentage of perceived graduate earnings.

Student: Net Benefit Access Course

The benefit amount to the student of the Access Course based on a percentage of graduate earnings. The costs were identified as:

- Course fees
- Course registration fee
- Travel costs
- Equipment costs
- Crèche fees

The Access Course benefits were identified as:

- Travel allowances received
- Other allowances received
- Graduate earnings

Higher Education: Discounted Net Cost/Benefit QA mechanisms

The cost-benefit amount to the Higher Education institution of the external quality assurance mechanisms. The quality assurance mechanism costs were identified as:

- AVA membership
- Number of representatives from the HE institution at the panel meeting
- Average earnings per hour for the representatives

- Cost of time spent in preparation and at panel
- Cost of time moderating
- Proportion of the National Framework operating costs

The quality assurance mechanism benefits were identified as:

- Funding for students from the case study Access Course accepted onto programmes at the HE institution
- Moderation expenses (Wilkinson, 1999).

5.1.1 Case A (summary data)

Providing Institution – contextual information

This providing institution was based in a large town in the North of England. It occupied a number of sites and offered provision ranging from GCSE programmes of study to elements of franchised degree programmes. The college drew its student population from the urban and rural areas surrounding the town. Progression from this institution was, primarily, local with learners enrolling on further courses offered by the college or programmes offered by the four local higher education providers (2 pre-1992 Universities and 2 post-1992 Universities).

The Access Course case study at this college formed part of a large multi-modular programme with over 200 learners. The pathway under examination in this case study was the 'Social Sciences' pathway; a full-time programme based on 799 teaching hours. At enrolment 45 students entered the programme, 38 completed with some accreditation. Over 50% achieved the requirements set out by the validating agency for the award of Access Certificate. At the time of completion, all of those obtaining the Access Certificate indicated their intention to progress to a higher education institution to further their studies. Thirteen of these learners were progressing to the higher education case study institution detailed on page 120. Summary

data for providing institution 'A' is provided in Table 5.1, below, followed by descriptions of factors/variables relating to this case study.

Course costs and benefits			
Costs		Benefits	
Course provision	£432,037	Funding	£623,495
Overheads	£158,274	Fees	£0
		Registration	£0
Total	<u>£590,311</u>	Total	<u>£623,495</u>
Net <u>benefit</u> of Access Course £33,184			

Quality Assurance mechanism costs and benefits			
Costs		Benefits	
AVA membership	£0		
Recognition	£818		
Registration/certification	£12,183		
Panel Staffing	£8,010		
Catering	£122		
Moderators fees	£3,343		
Documentation	£50		
Programme development	£13,616		
Administration (prog. dev.)	£100		
Management (prog. dev.)	£1,602		
Total	<u>£39,844</u>	Total	<u>£0</u>
Net <u>cost</u> of Quality Assurance mechanisms £39,844			

Table 5.1: Providing institution 'A' summary data

All figures are based on a 2.5% increase in component values per annum (or course review period except programme teaching hours, number of moderators). Figures have been calculated over a 10-year 'life span'. Yearly totals have been brought back to present value by using a discount factor of 10%.

Providing institution (summary data) factor descriptions

Quality assurance costs:

AVA Membership

This figure depended on the size of the providing institution and included recognition and registration/certification costs. However, because the Case A institution drew heavily on the AVAs resources a one-off fee was charged for recognition (£500 – see below) and registration/certification (£33 per student).

Recognition

Charge made by AVA over and above membership fee (£500) - per review period (every 5 years).

Panel staffing

The number of staff from the providing institution involved with the panel *in addition* to those teaching on the programme (12), multiplied by hours spent at panel (5), multiplied by the average hourly salary (£80) (£4,800 in year 1).

Registration/Certification

Charge made by AVA over and above membership fee (£33 per student), multiplied by the number of students registered (45) at the beginning of the programme (£1,485 in year 1) - per annum.

Catering

Figure provided by Access Course Co-ordinator (£75) - per review period (every 5 years).

Moderators' fees

For this large multi-modular programme 3 moderators were required. Moderators were paid by the providing institution (£150 per moderator) - per annum.

Documentation

Course documents required by AVA for the panel meeting (15) multiplied by the cost per document (photocopying/binding etc) (£2) (£30 in year 1) - per review period (every 5 years).

Programme development

Number of teaching staff involved in the quality assurance/development of the programme (12) multiplied by the hours spent on development and at panel (8.5), multiplied by the average hourly salary (£80) (£8160 in year 1) - per review period.

Administrative (prog. dev.)

Administrative cost of producing programme documentation. Hours spent on development (10) multiplied by cost per hour (£6) (£60 in year 1) - per review period.

Management (prog. dev.)

Number of management staff involved in course development (3) multiplied by number of hours involved (4 - includes 1 hour at panel) multiplied by cost per hour (£80) (£960 in year 1) - per review period.

Course costs:

Course provision

To provide an indicative estimate of the costs per teaching hour at this institution, the annual staffing costs (£12m - figure provided by Vice Principal) was divided by the institution's annual teaching hours (150,000 - figure provided by Vice Principal). This figure (£80) was then multiplied by the programme teaching hours taken from the course document (ranges from 17.5 to 30.5 hours per week, therefore a mid-figure of 23.5 was taken and multiplied by 34 weeks = 799 hours) (£63,920 in year 1) - per annum. For this case study course there was an additional element to account for other teaching related costs – such as administrative costs, heating etc. This was calculated as the overhead costs for the year (£4 million – figure provided by the Vice-Principal of the college) divided by the number of teaching hours for the year (150,000) multiplied by the programme teaching hours (799) (£21,307 in year 1).

Course benefits:

Funding

This figure was the funding unit price (£20 per unit) multiplied by the number of funding units gained (3800) (£76,000 in year 1) - per annum.

Higher Education institution – contextual information

This higher education institution was one of the four Universities local to the Access Course providing institution. It was a post-1992 University, which primarily drew its students from the local area. Its main study areas included the Sciences and Textiles. It also had a well-respected teacher training college. The majority of this higher education institution's students were young (under 21) learners enrolled on first degree level programmes of study. Provision was mainly full-time, but a growing number of courses were being offered on a part-time basis. Summary data for higher education institution 'A' is provided in Table 5.2, below, followed by factors/variables relating to this case study.

Quality Assurance mechanism costs and benefits			
Costs		Benefits	
AVA membership	£1,486	Funding for students*	£212,448
Time spent in preparation and at panel	£643	Moderation expenses	£1,114
Time moderating	£5,907		
National Framework	£429		
Total	£8,465	Total	£213,562
Net <u>benefit</u> of Quality Assurance mechanisms £205,098			

Table 5.2: Higher Education institution 'A' summary data

All figures are based on a 2.5% increase in component values per annum (or course review period except number of moderators and students accepted to this HEI from the Access Course). Figures have been calculated over a 10-year 'life span'. Yearly totals have been brought back to present value by using a discount factor of 10%.

*Accepted to this higher education institution from the case study Access Course.

Higher Education (summary data) factor descriptions

Quality assurance costs:

AVA membership

£200 per annum.

Time spent in preparation and at panel

Time spent by representative in preparation for panel - 1.5 hours reading documentation + time spent at panel - 5 hours (6.5 hours) multiplied by the average hourly salary of the representative (£60) (£390 in year 1) - per review period.

Time moderating

Total time spent moderating the programme - figure provided by HE institution moderator: 3 visits approx. 4 hours each (12 hours) multiplied by average hourly salary of HE representative (£60) (£720 in year 1) - per annum.

Quality assurance benefits:

Funding for students

This was calculated by taking the number of students accepted from this Access programme to this particular HE institution - based on the previous year's figure (13) multiplied by a conservative student funding amount (£2,200) (£28,600 in year 1) - per annum. It is important to note here that the funding for students' amount may be effectively cancelled out by teaching costs incurred by the HE institution.

Moderators expenses

For providing a moderator the HE institution received £150 from the providing institution - per annum.

Student – contextual information

This 21-year-old female learner returned to study following a period away from education brought about by the birth of her child shortly after leaving school. Whilst at school the learner obtained a number of GCSEs and wished to build up her study skills in order to enter university. The learner had not been in employment since leaving school and she believed that further study at pre-degree and degree level would help her achieve employment. Summary data for student 'A' is provided in Table 5.3, below.

Course costs and benefits			
Costs		Benefits	
Fees	£0	Travel allowance	£0
Travel	£122	Other allowance (state benefit)	£1,229
Equipment	£50	Graduate earnings attributable to Access Course*	£68,048
Crèche	£204		
Total	£376	Total	£69,277
Net benefit of Access Course £68,901			

Quality Assurance mechanism costs and benefits			
Costs		Benefits	
		Graduate earnings attributable to the QA mechanisms**	£40,829
Total	£0	Total	£40,829
Net benefit of Quality Assurance mechanisms £40,829			

Table 5.3: Student 'A' summary data

All figures are based on a 2.5% increase in component values, where applicable, per annum (or course review period). Figures have been calculated over a 10-year 'life span' (except graduate earnings figures - where a 20-year 'working lifetime' figure has been used). Yearly totals have been brought back to present value by using a discount factor of 10%.

* 60% of the total attributable to the *degree programme*

** 60% of the total attributable to the *Access Course*

Student (summary data) factor descriptions

Course costs:

Travel

Based on bus fares per week - £1.20 x 3 days (£3.60) multiplied by 34 weeks (£122.40).

Equipment

General stationery expenses of approximately £50 for the year.

Crèche

The providing institution charged a nominal amount of £2 per crèche period (morning/afternoon) which was used approx. 3 times per week by the student, multiplied by 34 weeks (£204).

Course benefits:

Other allowances

Income Support benefit of £36.15 per week, multiplied by 34 weeks (£1,229).

Graduate earnings attributable to Access Course

Based on graduate earnings figure of £16,725 (Association of Graduate Recruiters, 1997) in year 5 multiplied by a percentage of those earnings that were judged to be attributable to the Access Course (60%) (£10,035 in year 5).

Quality assurance benefits:

Graduate earnings attributable to quality assurance mechanisms

Percentage of the graduate earnings attributable to the Access Course (60%) (£6,021 in year 5).

5.1.2 Case B (summary data)

Providing institution – contextual information

This institution was a technology college located in a large city in the North of England. The majority of its provision was provided on two sites in the city centre. It offered a wide variety of accredited courses, which focussed upon technology and the manufacturing industries. The college drew its student population from, primarily, the local authority area within which the college was situated. The majority of provision offered by the college was undertaken on a part-time basis by learners. Progression from the courses offered by the college remained local – either entering employment, continuing to study at the college, or progression to one of the two local universities (one of which was a pre-1992 university) – although progression tended to be to the local post-1992 university.

This Access Course case study was a modular programme specialising in information technology. The course was structured around full-time attendance (19 hours per week) over 36 weeks of the year (684 hours in total) – although because of its modular framework, learners could determine longer periods of study if they wished to do so. At enrolment, 15 students entered the programme, 12 completed with some accreditation. Eight achieved the requirements set out by the validating agency for the award of Access Certificate. Upon completion all 8 students with the Access Certificate indicated their intention to progress to further, usually higher, study. Five of these learners were progressing to the higher education case study institution detailed on page 128. Summary data for providing institution 'B' is provided in Table 5.4.

Course costs and benefits			
Costs		Benefits	
Course provision	£356,103	Funding	£253,109
		Fees	£28,672
		Registration	£0
Total	<u>£356,103</u>	Total	<u>£281,781</u>
Net <u>cost</u> of Access Course £74,322			

Quality Assurance mechanism costs and benefits			
Costs		Benefits	
AVA membership	£14,856		
Recognition	£491		
Registration/certification	£0		
Panel staffing	£2,586		
Catering	£123		
Moderation fees	£1,114		
Documentation	£149		
Programme development	£2,586		
Administration (prog. dev.)	£83		
Management (prog. dev.)	£2,586		
Total	<u>£24,574</u>	Total	<u>£0</u>
Net <u>cost</u> of Quality Assurance mechanisms £24,574			

Table 5.4: Providing institution 'B' summary data

All figures are based on a 2.5% increase in component values per annum (or course review period except programme teaching hours and number of moderators). Figures have been calculated over a 10-year 'life span'. Yearly totals have been brought back to present value by using a discount factor of 10%.

Providing institution (summary data) factor descriptions

Quality assurance costs:

AVA Membership

This figure depended on the size of the providing institution and included recognition and registration/certification costs (£2,000) - per annum.

Recognition

Charge made by AVA over and above membership fee (£300) - per review period (every 5 years).

Registration/Certification

Charge included in AVA membership fee - therefore nil in this case.

Panel staffing

The number of staff from the providing institution involved with the panel *in addition* to those teaching on the programme (3), multiplied by the hours spent at panel (6), multiplied by the average hourly salary (£86.09) (£1,549 in year 1).

Catering

Figure provided by Access Course Manager (£75) - per review period (every 5 years).

Moderators' fees

For this programme 1 moderator was required. Moderators were paid by the providing institution (£150 per moderator) - per annum.

Documentation

Course documents required by AVA for the panel meeting (15) multiplied by the cost per document (photocopying/binding etc) (£6) (£90 in year 1) - per review period.

Programme development

Number of teaching staff involved in the quality assurance/development of the programme (3) multiplied by the hours spent on development (6), multiplied by the average hourly salary (£86.09) (£1,550 in year 1) - per review period.

Administrative (prog. dev.)

Administrative cost of producing programme documentation. Hours spent on development (10) multiplied by number of administrators (1), multiplied by cost per hour (£5) (£50 in year 1) - per review period.

Management (prog. dev.)

Number of management staff involved in course development (3) multiplied by number of hours involved (6 - consists of 6 hours at panel) multiplied by cost per hour (£86.09) (£1,550 in year 1) - per review period.

Course costs:**Course provision**

Annual staffing costs (£8,858,143 - figure provided by Vice Principal - Student Services) divided by the institutions annual teaching hours (102,897 - figure provided by Vice Principal - Student Services) (£86.09), multiplied by the programme teaching hours (612 hours) (£52,687 in year 1) - per annum.

Course benefits:**Funding**

This figure was the funding unit price (£23.32 per unit) multiplied by the number of funding units gained (1323) (£30,852 in year 1) - per annum.

Higher Education institution – contextual information

This institution was a post-1992 university. It was one of two universities located within the same city as the providing institution. It drew its student population from a wide area – the majority of whom were UK students. It had two main sites, one in the centre of the city, the other located on the outskirts of the city. Provision offered by the university took place, in the main, at the city centre site. A number of faculties provided a broad range of study programmes including Diploma, first-degree and post-graduate studies. The university had a large student population of around 30,000 learners, approximately half of these studied on a part-time basis. Summary data for higher education institution 'B' is provided in Table 5.5, below.

Quality Assurance mechanism costs and benefits			
Costs		Benefits	
AVA membership	£1,486	Funding for student*	£81,711
Time spent in preparation and at panel	£703	Moderation expenses	£1,114
Time moderating	£5,907		
National Framework	£165		
Total	<u>£8,261</u>	Total	<u>£82,825</u>
Net benefit of Quality Assurance mechanisms £74,565			

Table 5.5: Higher Education institution 'B' summary data

All figures are based on a 2.5% increase in component values per annum (or course review period except number of moderators and students accepted to this HEI from the Access Course). Figures have been calculated over a 10-year 'life span'. Yearly totals have been brought back to present value by using a discount factor of 10%. *Accepted to this higher education institution from the case study Access Course.

Higher Education (summary data) factor descriptions

Quality assurance costs:

AVA membership

£200 - per annum.

Time spent in preparation and at panel

Time spent by representative in preparation for panel - 1.5 hours reading documentation + time spent at panel - 6 hours (7.5 hours) multiplied by the average hourly salary of the representative (£60) (£450 in year 1) - per review period (every 5 years).

Time moderating

Total time spent moderating the programme - figure provided by HE institution moderator: 3 visits of approx. 4 hours each (12 hours) multiplied by average hourly salary of HE representative (£60) (£720 in year 1) - per annum.

Quality assurance benefits:

Funding for students

This was calculated by taking the number of students accepted from this Access programme to this particular HE institution (5), multiplied by average student funding amount (£2,200) (£11,000 in year 1) - per annum.

Moderators expenses

In repayment of moderator services the HE institution received £150 from the providing institution - per annum.

Student – contextual information

This male learner was 23 years old. His previous experience of education at school resulted in 2 GCSEs (he was studying for an additional GCSE in Maths). This student had occasionally been in employment, on a part-time basis, since leaving school. At the time of enrolment the learner was unemployed and as a result he received a state benefit (Income Support). Summary data for student 'B' is provided in Table 5.6, below.

Course costs and benefits			
Costs		Benefits	
Fees	£606	Travel allowance	£0
Travel	£122	Other allowance (state benefit)	£1,229
Equipment	£50	Graduate earnings attributable	
Crèche	£0	to Access Course*	£68,048
Total	£778	Total	£69,277
Net benefit of Access Course £68,499			

Quality Assurance mechanism costs and benefits			
Costs		Benefits	
		Graduate earnings attributable	
		to QA mechanisms**	£40,829
Total	£0	Total	£40,829
Net benefit of Quality Assurance mechanisms £40,829			

Table 5.6: Student 'B' summary data

All figures are based on a 2.5% increase in component values, where applicable, per annum (or course review period). Figures have been calculated over a 10-year 'life span' (except graduate earnings figures - where a 20-year 'working lifetime' figure has been used). Yearly totals have been brought back to present value by using a discount factor of 10%.

* 60% of the total attributable to the *degree programme*

** 60% of the total attributable to the *Access Course*

Student (summary data) factor descriptions

Course costs:

Course fees

Fee paid for to cover tuition fees for the Access Course (£606).

Travel

Based on bus fares per week - £1.20 x 3 days (£3.60) multiplied by 34 weeks (£122.40).

Equipment

General stationery expenses of approximately £50 for the year.

Course benefits:

Other allowances

Income Support benefit of £36.15 per week, multiplied by 34 weeks (£1,229).

Graduate earnings attributable to Access Course

Based on graduate earnings figure of £16,725 in year 5 multiplied by a percentage of those earnings that were considered to be attributable to the Access Course (60%) (£10,035 in year 5).

Quality assurance benefits:

Graduate earnings attributable to quality assurance mechanisms

Percentage of the graduate earnings (£16,725) attributable to the Access Course (60%) (£6,021 in year 5).

5.1.3 Case C (summary data)

Providing Institution – contextual information

This providing institution was a large general further education college located in the South East of England, which offered mainly vocational courses. The college drew over half of its student population from the local authority area within which the college was situated. Around 10,000 students were enrolled on courses provided by the college. Of these, more than half were registered as part-time students. The college was situated in an area of high unemployment and poverty. Progression from programmes of study offered by the college included employment/training, elements of degree level study offered at the college, and progression to degree level study at local higher education institutions. This institution had recently become an associate college of a local university.

The case study Access programme offered by this college was a modular course focusing on Business Studies. Six modules were offered on the programme, which were based on a course length of 36 weeks with 21 hours per week contact time (756 hours in total for the programme). The course was offered on a full-time basis. At enrolment 15 students entered the programme, the majority of these achieved some accreditation for their studies and 5 achieved the requirements set out by the validating agency for the award of Access Certificate. All of these learners indicated their intention to progress to the higher education institution case study detailed on page 136 (although only 2 did so). Summary data for providing institution 'C' is provided in Table 5.7.

Course costs and benefits					
Costs			Benefits		
Course provision	£475,667		Funding	£241,197	
			Fees	£8,043	
			Registration	£0	
Total	<u>£475,667</u>		Total	<u>£249,240</u>	
Net <u>cost</u> of Access Course £226,427					

Quality Assurance mechanism costs and benefits					
Costs			Benefits		
AVA membership	£1,485				
Recognition	£818				
Registration/certification	£9,229				
Panel staffing	£3,819				
Catering	£0				
Moderators fees	£0				
Documentation	£132				
Programme development	£9,547				
Administration (prog. dev.)	£117				
Management (prog. dev.)	£636				
Total	<u>£25,784</u>		Total	<u>£0</u>	
Net <u>cost</u> of Quality Assurance mechanisms £25,784					

Table 5.7: Providing institution 'C' summary data

All figures are based on a 2.5% increase in component values per annum (or course review period except programme teaching hours and number of moderators). Figures have been calculated over a 10-year 'life span'. Yearly totals have been brought back to present value by using a discount factor of 10%.

Providing institution (summary data) factor descriptions

Quality assurance costs:

AVA Membership

£200 per annum.

Recognition

Charge made by AVA over and above membership fee for recognition of Access Course (£500)

Registration/Certification

Charge made by AVA to register students and award certificates (£75), multiplied by the number of enrolments (13) (£1,125 in year 1).

Panel staffing

The number of staff from the providing institution involved with the panel *in addition* to those teaching on the programme (6), multiplied by the hours spent at panel (4), multiplied by the average hourly salary (£95.36) (£2,288 in year 1).

Catering

No charge - refreshments provided by AVA.

Moderators' fees

For this programme 1 moderator was required. The moderator's fee was included in other charges made by the AVA.

Documentation

Course documents required by AVA for the panel meeting (15) multiplied by the cost per document (photocopying/binding etc) (£5.34) (£80.10 in year 1) - per review period.

Programme development

Number of teaching staff involved in the quality assurance/development of the programme (6) multiplied by the hours spent on development and at panel (10), multiplied by the average hourly salary (£95.36) (£5,722 in year 1) - per review period.

Administrative (prog. dev.)

Administrative cost of producing programme documentation. Hours spent on development (10) multiplied by number of administrators (1), multiplied by cost per hour (£7) (£70 in year 1) - per review period.

Management (prog. dev.)

Number of management staff involved in course development (1) multiplied by number of hours involved (4 - consists of 4 hours at panel) multiplied by cost per hour (£95.36) (£381 in year 1) - per review period.

Course costs:**Course provision**

Annual staffing costs (£19,644,000 - figure provided by FEFC Inspection Report/College Registrar) divided by the institutions annual teaching hours (206000 - figure provided by FEFC Inspection Report/College Registrar) (£95.36), multiplied by the programme teaching hours (738 hours) (£70,376 in year 1) - per annum.

Course benefits:**Funding**

This figure was the funding unit price (£23.81 per unit) multiplied by the number of funding units gained (1020) (£24,286 in year 1) - per annum.

Higher Education institution – contextual information

This institution was a post-1992 university situated in central London. It was one of a number of higher education institutions local to the Access Course providing institution. The majority of its provision was first degree or undergraduate, the majority of which was undertaken on a full-time basis. The university had a number of departments/faculties, the largest of which focussed upon business studies/management type courses. In total the university offered around 50 undergraduate programmes of study and had approximately 14,000 students' spread across a number of sites within London. Summary data for higher education institution 'C' is provided in Table 5.8, below.

Quality Assurance mechanism costs and benefits			
Costs		Benefits	
AVA membership	£1,486	Funding for students*	£32,684
Time spent in preparation and at panel	£469	Moderation expenses	£1,114
Time moderating	£5,907		
National Framework	£67		
Total	£7,928	Total	£33,798
Net benefit of Quality Assurance mechanisms £25,872			

Table 5.8: Higher Education institution 'C' summary data

All figures are based on a 2.5% increase in component values per annum (or course review period except number of moderators and students accepted to this HEI from the Access Course). Figures have been calculated over a 10-year 'life span'. Yearly totals have been brought back to present value by using a discount factor of 10%. *Accepted to this higher education institution from the case study Access Course.

Higher Education (summary data) factor descriptions

Quality assurance costs:

AVA membership

£200 - per annum.

Time spent in preparation and at panel

Time spent by representative in preparation for panel - 1 hour reading documentation + time spent at panel - 4 hours (5 hours) multiplied by the average hourly salary of the representative (£60) (£300 in year 1) - per review period.

Time moderating

Total time spent moderating the programme - figure provided by HE institution moderator: 3 visits approx. 4 hours each (12 hours) multiplied by average hourly salary of HE representative (£60) (£720 in year 1) - per annum.

Quality assurance benefits:

Funding for students

This was calculated by taking the number of students accepted from this Access programme to this particular HE institution (2), multiplied by average student funding amount (£2,200) (£4,400 in year 1) - per annum.

Moderators expenses

In repayment of moderator services the HE institution received £150 per annum.

Student – contextual information

This learner was a 19 year old male. He left school with few recognised qualifications and now wished to continue his studies to progress in his chosen career of retail management. He intended to continue working part-time in order to finance his studies.

Course costs and benefits			
Costs		Benefits	
Fees	£595	Travel allowance	£0
Travel	£122	Graduate earnings attributable to Access Course*	£68,048
Equipment	£50		
Crèche	£204		
Total	£971	Total	£68,048
Net <u>benefit</u> of Access Course £67,077			

Quality Assurance mechanism costs and benefits			
Costs		Benefits	
		Graduate earnings attributable to QA mechanisms**	£40,829
Total	£0	Total	£40,829
Net <u>benefit</u> of Quality Assurance mechanisms £40,829			

Table 5.9: Student 'C' summary data

All figures are based on a 2.5% increase in component values, where applicable, per annum (or course review period). Figures have been calculated over a 10-year 'life span' (except graduate earnings figures - where a 20-year 'working lifetime' figure has been used). Yearly totals have been brought back to present value by using a discount factor of 10%.

* 60% of the total attributable to the *degree programme*

** 60% of the total attributable to the *Access Course*

Student (summary data) factor descriptions

Course costs:

Course fees

Fee payable by the student in order to study the Access Course (£595 for the year).

Travel

Based on travel fares per week - £2 x 3 days (£6) multiplied by 34 weeks (£204).

Equipment

General stationery expenses of approximately £50 for the year.

Crèche

£204 per year using the College's subsidised facilities.

Course benefits:

Graduate earnings attributable to Access Course

Based on graduate earnings figure of £16,725 in year 5 multiplied by a percentage of those earnings that were considered to be attributable to the Access Course (60%) (£10,035 in year 5).

Quality assurance benefits:

Graduate earnings attributable to quality assurance mechanisms

Percentage of the graduate earnings attributable to the Access Course (60%) (£6,021 in year 5).

5.1.4 Case D (summary data)

Providing institution – contextual information

This providing institution was situated in the South East of England. It was a large general college of further education offering a wide range of vocational provision ranging from foundation to elements of degree and postgraduate level study. It was based on three main sites, all within a few miles of each other. The majority of learners at the college came from the local area surrounding the college. There were around 28,000 students enrolled on programmes of study at the college – the majority of these were studying on a part-time basis. Progression for learners at this providing institution tended to be employment, enrolment on franchised elements of degree programmes at the college, or progression to the local higher education institution.

The Access programme case study offered by this college was a one year full-time programme developed to provide those with no formal qualifications the opportunity to progress to a degree or diploma in the Business Studies area. Learners on this course studied a core programme, which was common to all Access Courses offered by the college. In addition, students were required to choose specialist, business-related, options including economics, marketing and had the opportunity to study a foreign language. Upon completion of the course the majority of learners progressed to other, usually degree level, provision offered at either a nearby college or the local university – of which the college was an associate member. At enrolment 17 students entered the programme, 13 completed with the award of Access Certificate. All 13 of these students indicated their intention to progress to the higher education institution case study detailed on page 144. Summary data for providing institution 'D' is provided in Table 5.10.

Course costs and benefits			
Costs		Benefits	
Course provision	£244,170	Funding	£252,269
		Fees	£0
		Registration	£5,300
Total	£244,170	Total	£257,569
Net <u>benefit</u> of Access Course £13,399			

Quality Assurance mechanism costs and benefits			
Costs		Benefits	
AVA membership	£0		
Recognition	£0		
Registration/certification	£0		
Panel staffing	£3,754		
Catering	£49		
Moderators fees	£0		
Documentation	£50		
Programme development	£3,754		
Administration (prog. dev.)	£100		
Management (prog. dev.)	£313		
Total	£8,020	Total	£0
Net <u>cost</u> of Quality Assurance mechanisms £8,020			

Table 5.10: Providing institution 'D' summary data

All figures are based on a 2.5% increase in component values per annum (or course review period except programme teaching hours and number of moderators). Figures have been calculated over a 10-year 'life span'. Yearly totals have been brought back to present value by using a discount factor of 10%.

Providing institution (summary data) factor descriptions

Revalidation quality assurance costs:

AVA Membership / Recognition / Registration & Certification

Provision of staff for moderation duties (2). It was usually the case in this AVA that services provided by an Access Course providing institution would equal the services received (in terms of moderation duties etc) from other providing institutions/members of the AVA.

Panel staffing

The number of staff from the providing institution involved with the panel *in addition* to those teaching on the programme (12), multiplied by the hours spent at panel (3), multiplied by the average hourly salary (£62.50) (£2,250 in year 1).

Catering

Figure provided by Access Course Manager (£30) - per review period.

Moderators' fees

For this programme 1 moderator was required. A moderator would be supplied from one other institution within the AVA as a 'payment in kind' for services received by them.

Documentation

Course documents required by AVA for the panel meeting (15) multiplied by the cost per document (photocopying/binding etc) (£2) (£30 in year 1) - per review period.

Programme development

Number of teaching staff involved in the quality assurance/development of the programme (12) multiplied by the hours spent on development and at panel (6), multiplied by the average hourly salary (£62.50) (£4,500 in year 1) - per review period.

Administrative (prog. dev.)

Administrative cost of producing programme documentation. Hours spent on development (10) multiplied by number of administrators (1), multiplied by cost per hour (£6) (£60 in year 1) - per review period.

Management (prog. dev.)

Number of management staff involved in course development (1) multiplied by number of hours involved (3 - consists of 3 hours at panel) multiplied by cost per hour (£62.50) (£187.50 in year 1) - per review period.

Course costs:

Course provision

Annual staffing costs (£15,000,000 - figure provided by Access Manager/Dean of School) divided by the Institutions annual teaching hours (240000 - figure provided by Access

Manager/Dean of School) (£62.50), multiplied by the programme teaching hours (578 hours) (£36,125 in year 1) - per annum.

Course benefits:

Funding

This figure was the funding unit price (£20.50 per unit) multiplied by the number of funding units gained (1500) (£30,750 in year 1) - per annum.

Registration

The course registration fee paid by the student to register on the course (£38) per year, multiplied by the number of students on the course (17) (£646 in year 1).

Higher Education institution – contextual information

This institution was a post-1992 university. It was, geographically, the closest university to the Access Course providing institution. It drew its student population from, in the main, the surrounding area and was located on a number of sites within the region. Provision ranged from Diploma programmes of study to first degree and postgraduate work. The university had a student population of around 14,000, the majority of which were enrolled on undergraduate programmes of study. Higher Education Statistics Agency (HESA) data indicated that the most popular programmes of study, in terms of student numbers, were subjects allied to medicine, engineering and technology, and business/administrative study programmes (Higher Education Statistics Agency, 1996).

Quality Assurance mechanism costs and benefits			
Costs		Benefits	
AVA membership	£0	Funding for student*	£212,448
Time spent in preparation and at panel	£497	Moderation expenses	£0
Time moderating	£5907		
National Framework	£429		
Total	£6,833	Total	£212,448
Net <u>benefit</u> of Quality Assurance mechanisms £205,615			

Table 5.11: Higher Education institution 'D' summary data

All figures are based on a 2.5% increase in component values per annum (or course review period except the number of moderators and students accepted to this HEI from the Access Course). Figures have been calculated over a 10-year 'life span'. Yearly totals have been brought back to present value by using a discount factor of 10%. *Accepted to this higher education institution from the case study Access Course.

Higher Education (summary data) factor descriptions

Quality assurance costs:

AVA membership

Provision of services to AVA (consisted of supplying staff to Chair panel meetings and to moderate Access Courses).

Time spent in preparation and at panel

Time spent by representative in preparation for panel - 1.5 hours reading documentation + time spent at panel - 3 hours (4.5 hours) multiplied by the average hourly salary of the representative (£60) (270 in year 1) - per review period.

Time moderating

Total time spent moderating the programme - figure provided by HE institution moderator: 3 visits approx. 4 hours each (12 hours) multiplied by average hourly salary of HE representative (£60) (£720 in year 1) - per annum.

Quality assurance benefits:

Funding for students

This was calculated by taking the number of students accepted from this Access programme to this particular HE institution (13), multiplied by average student funding amount (£2,200) (£28,600 in year 1) - per annum.

Moderators expenses

No moderator expenses were paid, therefore nil in this case.

Student - contextual information

This 20-year-old male learner left school with a small number of GCSE passes. He had worked full-time since leaving school but now wished to expand his employment opportunities by eventually studying for a degree at a local higher education provider. Unlike other case study learners, this student had moved from full-time to part-time employment in order to study the Access programme. This had cost and benefit implications for the model, as shown in Table 5.12, below.

Course costs and benefits			
Costs		Benefits	
Earnings foregone	£2,100	Travel allowance	£0
Fees	£0	Graduate earnings attributable to Access Course*	£68,048
Travel	£122		
Equipment	£50		
Crèche	£204		
Total	£2,476	Total	£68,048
Net <u>benefit</u> of Access Course £65,572			

Quality Assurance mechanism costs and benefits			
Costs		Benefits	
		Graduate earnings attributable to QA mechanisms**	£40,829
Total	£0	Total	£40,829
Net <u>benefit</u> of Quality Assurance mechanisms £40,829			

Table 5.12: Student 'D' summary data

All figures are based on a 2.5% increase in component values, where applicable, per annum (or course review period). Figures have been calculated over a 10-year 'life span' (except graduate earnings figures - where a 20-year 'working lifetime' figure has been used). Yearly totals have been brought back to present value by using a discount factor of 10%.

* 60% of the total attributable to the *degree programme*

** 60% of the total attributable to the *Access Course*

Student (summary data) factor descriptions

Course costs:

Earnings foregone

This was the earnings element lost by the student as a result of enrolling and studying on the Access programme. Because of the time commitment required for the course, this learner

moved from working on a full-time basis (35 hours per week at a rate of pay of £3.25 per hour), to working on a part-time basis (16 hours per week at the same rate of pay). Therefore, his earnings foregone element had been calculated as the difference in hours ($35 - 16 = 19$ hours foregone) multiplied by the rate of pay ($19 \times £3.25 = £61.75$). This was then multiplied by the number of weeks in the academic year to reflect the total earnings foregone figure for this student ($£61.75 \times 34 \text{ weeks} = £2,100$). It may be reasonable to continue the earnings foregone element throughout the time spent on HE study. The effect of this is discussed further in section 5.2.1 – Sensitivity Analysis.

Fees

Course fees were waived for this student because of his low income.

Travel

Based on bus fares per week - $£1.20 \times 3 \text{ days} (£3.60)$ multiplied by 34 weeks (£122.40).

Equipment

General stationery expenses of approximately £50 for the year.

Course benefits:

Graduate earnings attributable to Access Course

Based on graduate earnings figure of £16,725 in year 5 multiplied by a percentage of those earnings that were considered to be attributable to the Access Course (60%) (£10,035 in year 5).

Quality assurance benefits:

Graduate earnings attributable to quality assurance mechanisms

Percentage of the graduate earnings attributable to the Access Course (60%) (£6,021 in year 5).

5.2 Consolidation of cost-benefit data

By consolidating the net benefit figures of the different actors within the 4 case studies, a comparison could be made between them (see Table 5:13, overleaf). It was also possible to establish across the three actor groups, and within the case studies chosen, that the total course net benefit figure of £15,886 was substantially lower than the overall quality assurance net benefit figure of £576,243. A key reason for this might have been the lack of costs incurred by the HE actors and the substantial benefits they gained. A substantial benefit of participation in the quality assurance mechanisms for HE actors was the funding they received through attracting the Access Course students from the linked case study courses onto programmes offered at the HE institutions. The sensitivity of these figures, and the variables upon which they are calculated, are discussed in the following section (5.2.1 – Sensitivity analysis).

Table 5.13 indicates that, given the initial data provided by the actors themselves, some gained financially far less than others. Providing institution C accumulated a course net cost of -£226,427 by the end of the 10-year life span of the model. The reason for this large cost of the course could be as a result of the figures used in the model. Whilst efforts were made to obtain accurate data from the providing institution concerned, in some instances these figures may have been indicative rather than precise amounts. In addition, the Access programme within this case study was not typical of the Access provision offered at the providing institution. The majority of Access programmes at the institution were large multi-modular programmes, which enabled efficiency gains to be made by linking modules together across subject/discipline areas. The case study Access programme was a much smaller free-standing course that had no links (in terms of resources) with other programmes. As a result, the cost of provision, according to the calculation methods used, was much higher for this course than other programmes.

Actor	Course Net Cost/Benefit	Quality Assurance Net Cost/Benefit
Providing institution A	£33,184	-£39,844
Providing institution B	- £74,322	- £24,574
Providing institution C	- £226,427	-£25,785
Providing institution D	£13,399	- £8,020
HEI A	-	£205,098
HEI B	-	£74,565
HEI C	-	£25,872
HEI D	-	£205,615
Student A	£68,902	£40,829
Student B	£68,500	£40,829
Student C	£67,078	£40,829
Student D	£65,572	£40,829
TOTAL	£15,886	£576,243

Table 5:13 Cost-benefit consolidation figures (Providing institution and HEI data – calculated over a 10-year period. Student data – calculated over a 20-year period)

In the case of providing institution C the key figures (i.e. the most substantial ones) were the cost of course provision, funding and development costs. These figures consisted of calculations of such factors as:

funding unit price;

hours spent on course development (teaching staff/admin. staff/management);

institutional staffing costs;

institutional teaching hours; and

programme teaching hours.

As these figures had the most influence, in terms of costs and benefits in the model, they were the focus of the sensitivity analysis below.

5.2.1 Sensitivity analysis

Providing institutions

The sensitivity of the eventual net benefit figure could be gauged if the above factors were increased or decreased by a percentage amount such as 10%. For example, the figure provided for institutional teaching hours would be increased in year 1 by 10% and then by the incremental amount in subsequent years (2.5%). The result of this analysis is shown in Table 5:14.

Factor	Increased by 10%		Decreased by 10%	
	QA	Course	QA	Course
Funding unit price (+/- 10% = 2.38)	-£25,785	-£202,317	-£25,785	-£250,536
Total funding units gained(+/- 10% =131)	-£25,785	-£202,326	-£25,785	-£250,528
Hrs spent on development: teaching staff(+/- 10% = 1)	-£26,740	-£226,427	-£24,830	-£226,427
Hrs spent on development: admin. staff(+/- 10% = 1)	-£25,797	-£226,427	-£25,744	-£226,427
Hrs spent on development: Management (+/- 10% = .4)	-£25,849	-£226,427	-£25,722	-£226,427
Institutional staffing costs (+/- 10% = 1964400)	-£27,185	-£273,994	-£24,385	-£178,860
Institutional teaching hours (+/- 10% = 20600)	-£24,512	-£183,184	-£27,341	-£279,279
Programme teaching hours(+/- 10% =73.8)	-£25,785	-£273,994	-£25,785	-£178,860

Table 5:14 Sensitivity analysis - Providing institution Case C factors

Table 5:14 shows that quality assurance costs were most sensitive to changes in hours spent on development of the course (teaching staff), institutional staffing costs and institutional teaching hours. A reduction in institutional teaching hours made course provision less expensive and also reduced the cost per hour of teaching staff time - which was used to calculate the cost of developing the course and the time spent at panel. These factors also had some influential effect upon the net benefit of the Access Course.

Earlier in this chapter, it was suggested that if the time spent at panel and time spent in course development was 'personal time', then this could be valued at approximately half of salaried or

contracted time (see page 106). If this had been applied to case study 'A' providing institution it would have reduced the cost of the quality assurance mechanisms from £39,844 to £29,031. However, this calculation would ascribe all course development costs to the external quality assurance mechanisms – some course development procedures may have been college-based. This is discussed further in Chapter 6: Conclusions.

In addition, all case study providing institutions indicated that an approximate measure of the hourly rate for development/provision costs was to divide institutional teaching costs by institutional teaching hours. However, an alternative approach would be to take an average lecturer salary divided by the number of contracted contact hours to arrive at an hourly rate. Table 5:15, below, shows the results of using this method for all case study providing institutions based upon an average salary of £25,000 divided by 16 hours per week contact time (calculated over a 34-week academic year).

Providing institution	Revised hourly rate	Net Cost/Benefit Access Course	Net Cost/Benefit Quality Assurance
A	£45.95	£192,500	-£29,958
B	£45.95	£72,888	-£20,957
C	£45.95	-£2,660	-£18,530
D	£45.95	£60,281	-£5,949

Table 5:15 Revised course provision/development costs – providing institutions

Using the above method would have drastically reduced the net cost of the Access Course for providing institution 'C' (a difference in cost of £223,767). It would also have returned a greatly increased benefit figure for all other providing institutions. The issue of calculating 'staffing costs' and their substantial effect upon the model is discussed in Chapter 6: Conclusions.

Students

Changes made to other variables may also have an effect on a stakeholder's net cost or benefit figure. For example, in Chapter 4: Methods, it was noted that the 'value' of the Access Course's external quality assurance mechanisms, in assisting a student to gain graduate employment, may be considerably below the figure of 60% used in the model. Using case 'C' as an example, if the 'value' of the quality assurance mechanisms was taken to be a 30% contributory factor to graduate earnings, the effect upon the model would be to reduce the subsequent total benefit gained by the student from the external quality assurance mechanisms (from £40,829 at 60% of the figure attributable to the Access Course, to £20,415 at 30%).

Other variables that may change within the model include the earnings foregone variable present in case 'D', which may continue throughout the student's time spent on HE level study following completion of the Access Course. Using case 'D' as an example, if the earnings foregone by the student were to continue within the model from year 2 to year 5 (to cover the average time spent on a degree programme – 4 years), the effect upon the model would be to decrease the eventual net benefit received by the student as a result of studying the Access Course (from £65,572 to £58,510). The effect on the IRR would also be to reduce it from 76% to 51%.

Using other discipline areas and student circumstances would also alter the net benefit figure and IRR. Table 5.1 on page 109 shows the many decisions that could have been taken by a learner prior to, and post, Access Course enrolment. For example, a decision might have been made to give up full-time employment in order to study. An implication of this would be that the student would incur an earnings foregone figure whilst undertaking the Access Course and subsequent Degree programme (similar to that incurred by case study 'D' student, above). However, the earnings foregone element could reasonably be extended throughout the working life of the student, because had it not been for the Access Course and subsequent study intervention, the student would have continued with their previous employment. Therefore, if all other variables remained the same, based on case study 'D' student data and an earnings foregone element of £8,000, the result would be to return a net cost figure of £21,082 and return an IRR of -3.3%.

Some students may have shorter or longer working lifetimes dependant on their age upon enrolment. The traditionally (i.e. over 21 years of age) mature profile of Access students (discussed earlier in this chapter) indicates that for some a working lifetime of 15 years may be more appropriate. Using case 'D' student as an example, if all other variables remained the same, would return a net benefit for the Access programme of £51,820, based on an earnings foregone element of £2,100. Alternatively, a longer working lifetime may be more appropriate. Steel & Sausman (1997) indicate that of all the students entering HE, many are under the age of 30 (see page 111 of this chapter). Using a working lifetime of 30 years would return a net benefit for the Access programme of £82,021.

Also, data indicating the progression routes of graduates shows that of those looking for employment, a proportion of these are still without a job some months later. The Higher Education Statistics Agency (HESA) publishes annually the number of graduates seeking work and the number who have entered employment or followed other progression routes (HESA, 1999). At present the model assumes a graduate will enter employment directly following completion of their course. This may not always be the case – HESA data indicate that a proportion of students obtaining a degree are still seeking work approximately a year later (HESA, 1999: 20). The implications for the model of this scenario would be to effectively reduced the working lifetime of the model for the student – instead of graduate earnings applying in year 5, they would apply from year 6 onwards. Using case 'D' student as an example, if all other variables remained the same, would return a net benefit for the Access programme of £57,226.

An additional variable element could also be the Access Course and subsequent Degree subject studied as this might have an effect on eventual earnings. Using a recent study, percentage differences in salary levels for differing Degree subjects have been used in order to calculate the potential different net benefits and IRRs for Access Course students (Belfield et al, 1997).

In their study Belfield et al (1997) indicated, inter alia, that male and female salary levels were different across subjects, they varied across degree class, and might even be influenced by the

status of the degree-awarding institution. However, these figures were used as broad indicators of the salary differences across subjects. The figures used were the average male/female salary per subject category one-year after graduation³, and from these an average was established across subjects. From this figure deviations from the average, in percentage terms, were also established. For example, the average salary for computer sciences was £13,552 for males and £15,384 for females (1991 figures), which produced a grouped average across male and female of £14,468. Applied to the average graduate salary across all subjects of £12,728, produced a figure for computer sciences of 13.6% above the average. Psychology had an average salary of £12,008, 5.6% below the average, and Philosophy had an average salary of £10,352, 18.6% below the average. Applied to the model, these differences in salary level had an impact on the net benefit and IRR figures, as shown in Table 5:16, below.

The model used the average salary figure for 1997 of £16,725 (Association of Graduate Recruiters, 1997). The above percentage differences attributable to the individual subject areas produced the results displayed in Table 5:16, based on case study student 'D' data.

Subject	Average salary	Difference from average	Revised salary	Net benefit AC	Net benefit QA	IRR AC
Computer sciences	£16,725	13.6%	£18,999	£74,825	£46,381	80.6%
Philosophy	£16,725	-18.6%	£13,614	£52,915	£33,235	69.8%
Psychology	£16,725	-5.6%	£15,788	£61,760	£38,542	74%

Table 5:16 Earnings differences for subject studied

Higher Education

Case study higher education institutions all gained substantial benefits as a result of their participation in the quality assurance mechanisms. However, it could be argued that the majority of the benefit element accrued would have been cancelled out by the costs associated with teaching the former Access students when they progressed to the HE institution. It was further argued that this was factored by the Higher Education Funding Council when they calculated the 'teaching' funding amount to award to HE institutions. Essentially, a matching

³ Belfield et al (1997) Appendix 4: Salary levels by subject, p22.

exercise took place where the funding element awarded equalled the perceived teaching costs. An alternative scenario, supported by some representatives of the HE institutions, involved taking only a proportion of the student enrolments (on HE programmes) as providing the benefit of participation in the Access Course quality assurance mechanisms. One representative (associated with case study 'D') suggested that out of the 13 students enrolled at the institution, using this method, 3 might be taken as the benefit element of association with the Access Course's quality assurance mechanisms. This would reduce the benefit figure within the model, for this case study actor, from £205,615 to £42,524, if all other variables remained the same.

Some HE institutions indicated that because they had relatively low baseline funding for course provision from the Higher Education Funding Council, this effectively matched the tuition fees element they received from Local Education Authorities. As a result many institutions (particularly post-1992 organisations who traditionally had lower levels of funding than more established universities) could expand their student numbers up to the limit of their existing capacity. This point was also raised in a Coopers and Lybrand evaluation of funding carried out for the Funding Council in 1995 (Higher Education Funding Council for England, 1995). Additionally, the relatively small number of Access students progressing to HE institutions allowed them to be viewed as adding relatively little to the total costs of programme provision. However, the beneficial effect of this option was reduced for some case study institutions as they had higher levels of unit funding from the Funding Council per student than that provided by tuition fees and relatively higher numbers of Access entrants. Therefore, whilst this approach may have been *prima facie* beneficial to all case study HE institutions, the beneficial effect may have been mitigated by varying course or programme costs.

Further, because of the 'contract' between the Funding Council and the HE institution any deviation (on the part of the HE institution) from mutually agreed student numbers resulted in the imposition of financial penalties in the form of a reduction in current and subsequent funding. The implications for the model of this scenario would be to substantially reduce, or cancel out completely, the current benefit figure for HE institutions as this is solely dependant upon student funding.

5.3 Additional factors

In addition to the more quantifiable cost and benefit factors, others emerged as a result of the research - such as influence on the Access programme. Further questioning of key actors, framed as: *'What would your institution lose if it were not a member of an AVA?'* provided the following responses:

influence on local Access provision would be lost;

there would be less opportunity to develop and improve links with FE colleges and build up trust with them;

membership of an AVA may improve recruitment;

staff development opportunities would be lost;

external quality assurance mechanisms for Access required that certain provision, such as study skills, was adequately provided in the Access programme. This 'reassures' HEIs and may have some effect on the retention and eventual achievement of the Access student at the HEI; and

AVA membership provides a *'route for keeping up to date with what's happening [in Access].'*

Three of the most important areas outlined above were developed further by testing their validity with a number of different HEIs. These three areas were:

recruitment;

retention/achievement; and

staff development/networking opportunities.

All the HEI staff members contacted agreed that these areas were influenced by the external quality assurance mechanisms and had some beneficial effect for the HEI - but they found it very difficult to measure their effects in a quantifiable way. Part of the problem was the lack of a control group with which to compare the data and also that the influence of the external mechanisms would *'vary so much [across courses and with individuals].'*

Many respondents felt that through their membership of an AVA and their participation in validation activities they were able to develop formal and informal links between Access Courses and the HEI. Some felt that there was a positive correlation between the number of hours given up by staff members to the external quality assurance mechanisms and the number of Access students recruited. This was affirmed by a HEI Access Officer who stated: *'... our input has dropped - into the external quality assurance mechanisms - because we no longer have as many fixed-link Access programmes. If you add up all the hours put in by members of staff to those courses it would probably have been higher than it is now with very few fixed-link courses.'* An Access Co-ordinator at another HEI commented that the level of influence on recruitment of the external quality assurance would additionally depend on the processes of the AVA concerned and the value of recruitment benefits could even *'vary within an AVA - never mind within the National Framework!'* The publication of 'Access Course Directories' and issuing of credit statements/records of achievement by AVAs also benefited the HEI in terms of recruitment as they lessened the burden of recruitment activity carried out by the HEI in matching up appropriately qualified students to appropriate courses. One HEI contact commented that: *'The information within these data sources [Access Course Directories, credit statements, records of achievement] is of great value as they detail the course content, structure, contact hours, and provide contact names and addresses.'*

With all three of the identified areas of recruitment, retention/achievement, and staff development/networking the level of benefit of the external mechanisms experienced by the HEI was dependent upon how well developed their internal quality assurance processes and procedures were. For example, recruitment activity may be focused outside of that offered through the AVA and National Framework. As a result the external mechanisms may have little

or no additional benefit for the HEI. This was highlighted by an Access Officer: *'Because our recruitment strategy is quite good the effect of the external mechanisms is negligible. For example, we have very strong links with associate colleges, we invite students in and provide them with associate student status (i.e. those of linked colleges) which allows them to use the library and computing facilities and introduces them to the Higher Education environment. They are given a great deal of guidance by us as to the "correct" route they should take through HE'.*

One HEI involved with the research held a dominant position within its local AVA as it was the only University member. As a result communication between the HEI and the Access Course providing institutions took place very frequently (through attendance at panels and moderation activities) but also *outside* of this external quality assurance activity. For all the HEIs the involvement with the AVA was therefore part of a wider strategy for developing links with FE, and the impact of the AVA's mechanisms would depend upon the scale of the HEIs wider strategy of integration with FE.

Nevertheless, bearing in mind the above comments, when asked how much of the recruitment of Access students was as a result of the external quality assurance mechanisms all the HEI staff members provided percentages (when urged to do so) ranging from 0 to 60%.

Additional problems encountered with retention/achievement tended to focus around the differences encountered across subject areas - Law and Science commonly being cited as examples. One Access Officer found it difficult to ascribe a value, adding: *'... the students from Access programmes are among those we retain. Therefore there is an effect on retention/achievement but I'm not prepared to put it into numbers or percentages. It would be very variable across courses.'* Following consideration of these difficulties other HEI representatives provided a range of 0 to 60% beneficial influence on retention/achievement of the external quality assurance mechanisms.

In terms of staff development an indication as to its importance was gained through an examination of the panel evaluation sheets from a case study AVA. 68 evaluation sheets were analysed and of those 37 respondents had never attended a panel before and 31 had. 97% of

those who had not attended a panel and 84% of those who had, believed it had been a useful staff development activity. Also 92% and 100% respectively were clear about the panel processes (see Appendix 6 - Analysis of evaluation forms). This suggested that the most 'value' of the panel process in terms of, for example, professional development was achieved in the first few hours of exposure (4-5 hours for an Access panel).

The level of benefit gained in terms of staff development/networking activities can vary *'...depending on the job the member of staff involved has in the University.'* One University Dean of School argued that a course administrator or manager may be required as part of his/her job to be knowledgeable in quality assurance issues. This could be gained through attending internal panels, representing the University within national bodies etc. However, academics might not spend as much time, or might not be available to spend as much time, on quality assurance related issues. *'Therefore for these members of staff the external mechanisms will be of great benefit as they will provide the major source of staff development.'*

Despite this, the staff development/networking benefit of the external quality assurance mechanisms was felt to be quite small - ranging from 0 to 20%. Commenting on this low figure one Access Officer said that this was because staff development/networking was the result of various activities and not just those initiated by the AVA. However, the cost-effectiveness of the AVAs activities were noted: *'... if we weren't going to [the AVA] ... to get this information we would have to spend at least the same time going to conferences and workshops - which would cost more than that in terms of fees and travel than the £200 membership [of the AVA] ... The benefits of the work outweigh the costs of having to get it other ways.'*

Without exception, the questions that focused on staff development/networking benefits produced the most lengthy responses, although some respondents still had difficulty in quantifying these benefits. To explore this area further the respondents were presented with Figure 5:2. This was adapted from Drummond's model, used in health-care scenarios to establish the beneficial effect, in terms of Quality Adjusted Life Years (QALYs) a patient may expect to gain from a given treatment (Drummond, 1987).

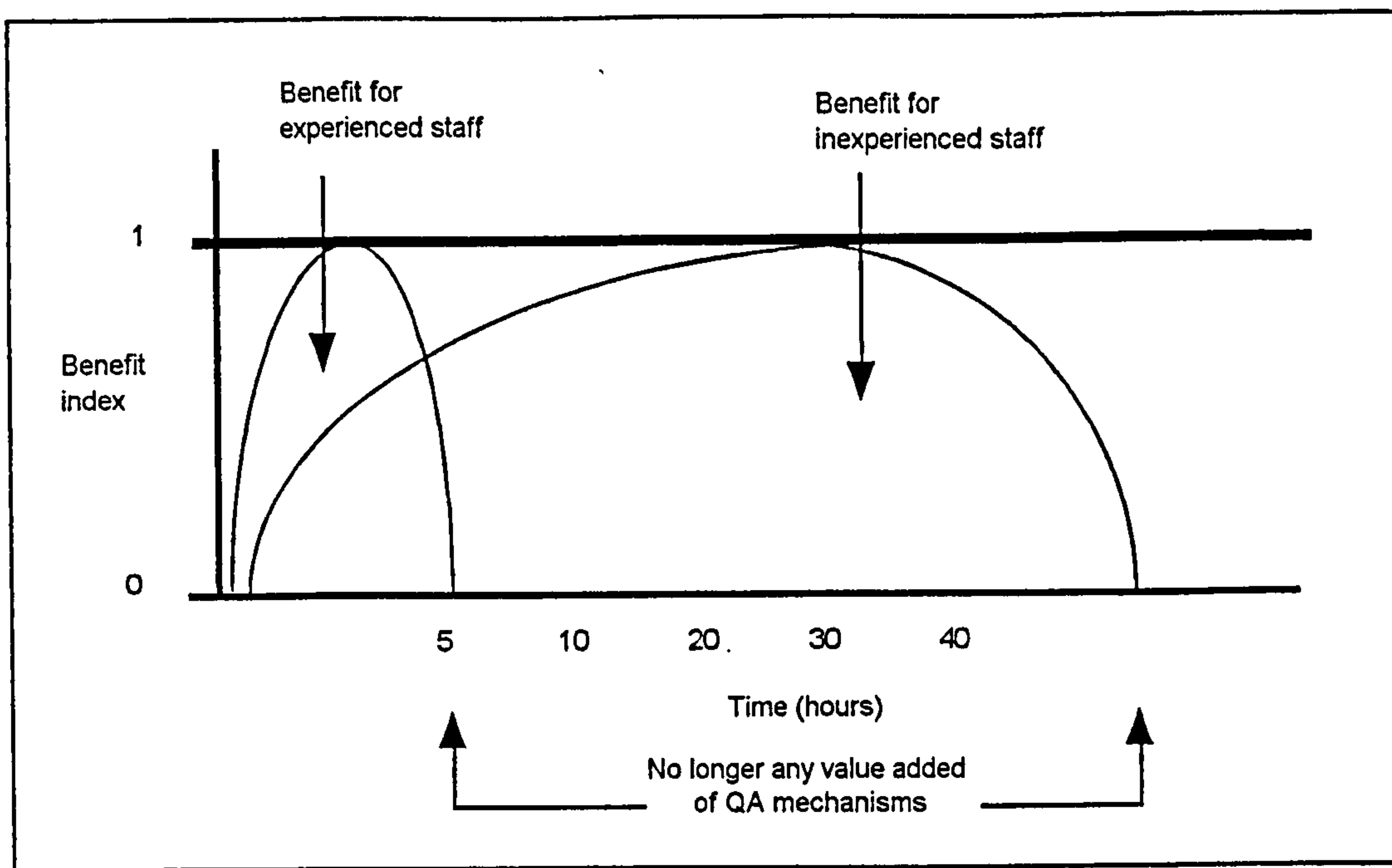


Figure 5:2 Maximum value-added of the external quality assurance mechanisms to staff development/networking

Figure 5:2 suggests that following a number of 'hours of exposure' to the external quality assurance mechanisms the benefit, in terms of staff development/networking would 'tail' or 'level' off. The number of hours at which maximum value would be added, in terms of staff development/networking would be within a range that depended upon the individual staff member's experience of internal and external quality assurance mechanisms. These levels of experience were set out as:

1. A staff member inexperienced in internal (HE) and external (sub-degree) quality assurance (e.g. a new recruit);
2. A staff member inexperienced in internal (HE) quality assurance;
3. A staff member experienced in internal (HE) quality assurance;
4. A staff member inexperienced in external (sub-degree) quality assurance;
5. A staff member experienced in external (sub-degree) quality assurance; and

6. A staff member inexperienced in both internal (HE) and external (sub-degree) quality assurance.

All respondents agreed that the maximum added value to staff development of participation in the external quality assurance mechanisms would decrease with the staff member's level of experience of quality assurance processes. However, many added to this that there would be additional hours of involvement per year to keep informed with Access developments as '*... the nature of Access development is constantly changing*' and by giving up a number of residual hours per year to the external mechanisms it '*... facilitates networking and [helps us to] keep informed of current practices*'.

The maximum value adding 'hours of exposure' to the external mechanisms ranged from 5 for experienced members of staff to 40 for non-experienced staff. The residual hours per year (the number of hours exposure required to keep up-to-date with the quality assurance mechanisms) ranged from 2 to 16 for experienced to non-experienced staff. As staff members became more experienced their residual hours of exposure per year would drop to that of experienced staff. The result of this is shown as Figure 5:3.

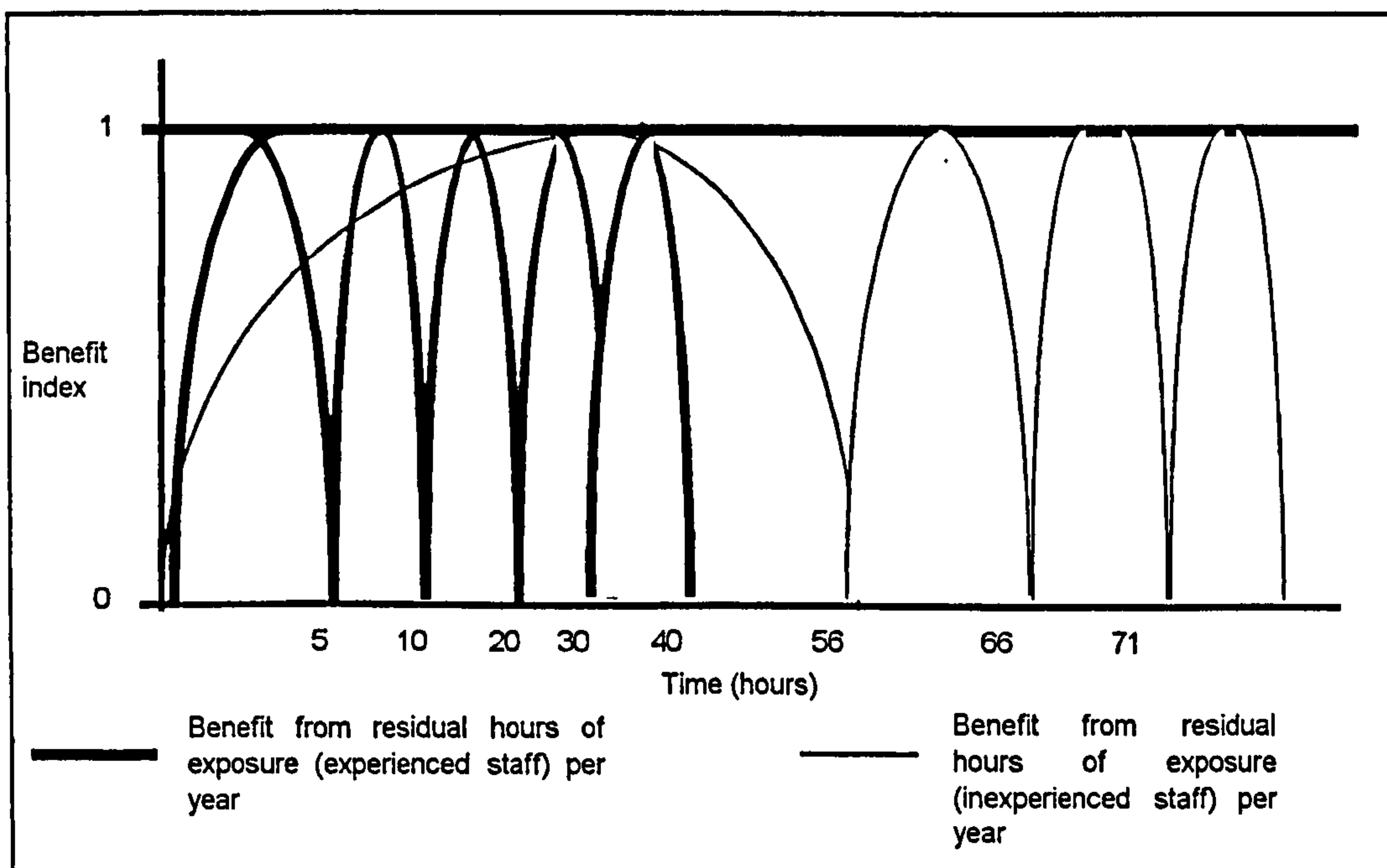


Figure 5:3 Value-added of the external quality assurance mechanisms to staff development/networking with residual hours of exposure

Chapter 6

6. Conclusions

Access education is very diverse in provision, subject area and method of validation/recognition (Davies, 1994; Reynolds, 1996). However, commonalities were found between four differing case study courses validated by three AVAs and a model was built to highlight general costs and benefits of quality assurance procedures. Chapter 5: Findings, showed the consolidated results of an analysis of the four case study courses - this has been reproduced as Table 6:1, below.

Actor	Course Net Cost/Benefit	Quality Assurance Net Cost/Benefit
Providing institution A	£33,184	-£39,844
Providing institution B	- £74,322	- £24,424
Providing institution C	- £226,427	-£25,785
Providing institution D	£13,399	- £8,020
HEI A	-	£205,098
HEI B	-	£74,565
HEI C	-	£25,872
HEI D	-	£205,615
Student A	£68,902	£40,829
Student B	£68,500	£40,829
Student C	£67,078	£40,829
Student D	£65,572	£42,055
TOTAL	£15,886	£576,243

Table 6:1 Cost-benefit consolidation figures (Providing institution and HEI data – calculated over a 10-year period. Student data – calculated over a 20-year period)

6.1 Providing institutions

Overall, using the calculations outlined in Chapter 4: Methods, the providing institutions had no direct, financial, benefit of the external quality assurance mechanisms as all cases returned a negative net benefit figure for the quality assurance mechanisms. However, it was argued that without the external quality assurance mechanisms the institutions would not receive any FEFC funding for Access provision. Given this argument, the net cost of the external quality assurance mechanisms could be lessened if the calculations were based upon the discounted net benefit of the Access Course minus that of the external quality assurance mechanisms. Using this method resulted in Case A producing a net cost of the quality assurance mechanisms of £6,660. In Case D, the benefit figure for the providing institution was £5,379, although in the remaining case studies the costs far exceeded the benefits for both the external quality assurance mechanisms and the Access Courses themselves. This indicated that these particular Access Course case studies were expensive in terms of running costs (expenditure exceeded income). However, the model for the providing institution was based on limited, easily measured, financial factors - the beneficial effect in terms of esteem, curriculum development/staff development, networking opportunities for the providing institution and the beneficial effects on other types of provision were not factored. Essentially, the costs were usually more easily quantified in monetary terms than the benefits. Nevertheless, the model was welcomed as a useful indicator of the main cost and benefit areas involved in Access Course provision and its quality assurance.

Additionally, Chapter 5: Findings discussed different methods of calculating 'running costs' – which for the providing institutions consisted of course development and course provision costs. Phelps (1996) indicated that development time should be costed at half that of core contact time. However, this method was based on the assumption that course development activities took place outside of the usual working day and, as a result, the number of hours contact time undertaken by the tutor was not affected. This was an inappropriate method for the teaching staff involved with the case study providing institutions, as development time was part of the contracted contact time. For example, if a tutor was contracted to undertake 16 hours per week teaching and teaching-related activities, 3 hours of that may have been assigned by the

providing institution to course development activities.

Given the actual figures used in the providing institutions' calculations, it was interesting to note the difference between the course net benefit and the quality assurance net benefit. Table 6:2 shows the quality assurance net benefit expressed as a percentage of the course net benefit in the four case study providing institutions.

Actor	Course Net Cost/Benefit	Quality Assurance Net Cost/Benefit as a percentage of the Course Net Cost/Benefit
Providing institution A	£33,184	120%
Providing institution B	- £74,322	33%
Providing institution C	- £226,427	11%
Providing institution D	£13,399	60%

Table 6:2 Providing institutions' quality assurance net benefit

The above table clearly shows that Case A had the largest quality assurance cost expressed as a percentage of the course net cost/benefit. In addition, the results indicated a relationship between the quality assurance figures and the Access Course figures – effectively, the higher the percentage, the lower the course costs. Expressed another way, the analysis showed that high course costs were mitigated by low quality assurance costs. The average figure for quality assurance net benefit was 56% of course costs. Case D showed a quality assurance net benefit figure of 60% - well over half of the course net benefit. However, data for case D was fragmentary and based upon figures received from a limited number of sources. Further detail in this case study could reduce the net benefit figure for quality assurance in line with other cases.

Table 6:2 shows the wide differences in course net cost/benefit figures. These differences indicated the contrasts in types of provision, their varying related costs, and the fragmentary and variable data available relating to case study factors. In addition, the less quantifiable nature of some benefits of the quality assurance mechanisms might have assisted in maintaining these wide differences. Related to this, was the actual method of calculating the

'staffing costs' element. Chapter 5: Findings indicated that by using an alternative method of calculating staffing costs, the Access Course costs and quality assurance costs could be substantially reduced (see page 151). However, during the data-gathering phase of the research, all of the providing institutions indicated their preference for the approach actually used (institutional costs divided by institutional teaching hours). A key reason put forward for using this method was that it provided a general indicator of institutional teaching costs. This broad approach to costing indicated that Access provision was seen by these institutions as core provision. The marginal approach, whereby the course was seen as an additional element to the main provision (and was therefore costed separately) was not the favoured approach by these providing institutions. Nevertheless, the model was produced to accommodate the two different approaches.

As the providing institutions all returned large net costs in terms of Access Course provision (based on the calculation methods used), this clearly showed that the funding received for these courses was inadequate as it did not cover the costs incurred. Since the research began, more complex funding mechanisms have developed. These have been matched by costing mechanisms in providing institutions, which more accurately show, and disaggregate further than was the case in the research, the cost elements of course provision.

6.2 Higher Education Institutions

HEI actors involved with the research achieved better returns than the providing institutions. In the main, benefits to the HEI actors took the form of additional students attracted to their own HE provision following completion by the student of the case study Access Course. It was considered reasonable to include this as a benefit for the HEI (in terms of fee income generated by the additional student numbers) as it was unlikely that the Access student would have entered HE had it not been for the Access Course and its associated, HE influenced, quality assurance mechanisms. It has been discussed in Chapter 5: Findings, that this variable could be altered within the model in consideration of teaching costs within HE.

It was possible that Access students from Access Courses outside of the case study course and the associated AVA could enter the case study HEI at no cost to that HEI, in terms of commitment to the Access Courses' quality assurance processes. This could have reduced the beneficial element attached to the case study Access students as, by virtue of the cost of involvement for the HEI, they were viewed as more expensive students than those from other Access Courses. However, some HEI actors stated that Access students from courses associated with their institution (through the external quality assurance mechanisms) did fare better in terms of retention rates and HE programme achievement.

The analysis showed positive quality assurance net benefit figures for all the case study HEIs - ranging from £25,872 to £205,615. This return for the HEI in terms of time commitment and other resourcing given to the external quality assurance mechanisms of Access Courses could appear, *prima facie*, profitable for the HEI concerned – although other forms of investment in student recruitment might provide an even greater return. For example, the production and circulation of a user-friendly prospectus, and the development of a web-based approach to marketing courses may encourage more students to enrol irrespective of the HEIs involvement in Access quality assurance. However, a major weakness of these approaches to recruitment would be that the more personal touch, that involvement in the external quality assurance mechanisms brings, could potentially be lost. In addition, they would remove the HEIs ability to influence the Access Courses development and provision in line with its own requirements.

6.3 Students

Students of the case study courses appeared to have no costs associated with the external quality assurance mechanisms - they only had costs incurred by studying on the Access Course, such as crèche facilities and equipment purchases. The benefits were achieved through ascribing an amount (60%) of potential graduate earnings to the Access Course. From this figure, an amount (60%) was ascribed to the external quality assurance mechanisms. The various actors involved with the project agreed that this was an appropriate amount. However, as discussed in Chapter 5: Findings, additional costs may be incurred by the student whilst

progressing through the education system and achieving graduate status. For example, the earnings foregone element may continue throughout the time spent on the Access Course and subsequent HE programme. In addition, other costs may also continue. The crèche element was only considered within the model for the time spent on the Access programme. It may have reasonably extended to the time spent on the following HE programme (although the case study students with these costs indicated they would study their preferred HE programme on a part-time basis in order to avoid further crèche fees). Therefore, whilst the case study data accurately represented the situation for the case study students concerned, the variable elements (such as earnings foregone, perceived graduate earnings and crèche costs) could all be adjusted to represent the unique circumstances of a particular learner.

6.4 Strengths and weaknesses of the model

6.4.1 Assessing potential earnings

One of the problems encountered in the research was that of 'what is a cost or benefit of the quality assurance procedures and what is a cost or benefit of some other process or procedure?' - such as the course itself or the HE programme which followed it. Straightforward financial transactions were easily ascribed - such as the costs of course provision (not directly linked to quality assurance) and the cost of certification/registration (resulting from quality assurance procedures). Complications arose when the influence of cost and benefit components/factors was not so easily distinguished. For example the contentious issue of graduate earnings highlighted that education had a beneficial effect on future earnings. However, calculations of the 'worth' of education were usually based on higher education (Psacharopolous, 1985; Woodhall, 1992) and not Access education. It has been argued in this work that some of this benefit should be ascribed to the Access Course as it is an important 'key to unlocking the door' to HE, and from there a route to graduate earnings. A figure of 60% of potential (graduate) earnings had been used to reflect the importance attached to Access education as unlocking the door for many disadvantaged students to higher education. This

figure could be reduced by the opportunity cost incurred to a student throughout their time in education. For some this may be the loss of income from paid employment and for others this may consist of the loss of state benefit. Opportunity costs could also include the loss of time spent with friends or family, due to studying – although mechanisms for measuring this factor in relation to other more easily quantifiable factors might be difficult.

Most of the students of the case study courses had no opportunity cost (other than the loss of some state benefit) but others outside, with similar circumstances as case study student 'D', might have substantial opportunity costs associated with studying on an Access Course. An additional and related element is the income that would have been received by the student as a non-graduate throughout his/her working life. The model has been constructed to accommodate this variance. Indeed a strength of the model has been its ability to accommodate these changes in circumstances for individual students. The opportunity cost element can be inserted into the model within the relevant time period – such as throughout the duration of the Access Course, subsequent degree programme or the lifetime of the model. Examples of earnings foregone were produced in Chapter 5 Findings (see 5.2.1 Sensitivity analysis).

6.4.2 Non-graduate earnings

Chapter 5: Findings, discussed the various influences which may affect a learners eventual net benefit figure for studying on an Access programme. These included the discipline area studied, the expenses incurred whilst studying (such as travel, crèche provision etc.) and the earnings foregone. Related to this are the earnings of a non-graduate compared to a graduate. The model does not specifically factor non-graduate earnings as a comparator for the additional value of graduate earnings. However, the earnings foregone examples provided in Chapter 5: Findings detail the full-time earnings foregone of a learner whilst undertaking their studies. This can be used as an effective proxy measure for a comparison between graduate and non-graduate earnings.

The examples provided in Chapter 5: Findings (5.2.1 Sensitivity analysis) showed that whilst earnings might be increased as a result of studying at HE level they are considerably reduced when compared to non-graduate earnings. The case study Access students in this work did not give up full-time jobs in order to study but others may have done so. For these the costs and benefits of studying will not be so widely separated. Therefore the ability to include a variety of earnings foregone figures within the model, would produce, for these learners, a more precise and comparable value on their graduate earnings.

6.4.3 Achieving graduate status

The probability of achieving graduate status was not factored in the model because of the lack of suitable available data upon which to base probability claims, although consideration was given to it in Chapter 5: Findings. It is suggested that with the increase of graduate numbers will come a decrease in average graduate earnings, compared to those of non-graduates. However, Access Course students are not 'average' students as Access Courses are specifically targeted at disadvantaged groups, such as ethnic minorities and mature learners, who may experience significantly different rates of return from typical graduate students. It may also be the case that Access Courses do not lead to high status (and highly paid) employment. This area has traditionally been very complex and further research is required that not only tracks a large sample of students through higher education and on to graduate employment, but also seeks to unpack the differences that are as a result of such factors as age, class, ethnicity and other circumstances. This would facilitate the development of more accurate graduate and employment figures for Access students and, indeed, other non-traditional students¹.

¹ Some studies have been conducted which track students from further education to higher education and monitor completion rates (Davies & Yates, 1987; Neville, 1994; Capizzi, 1996).

6.4.4 Quantifiable costs and benefits

The research indicated that HEIs return on investment could vary across validating agencies. By adapting Drummond's Quality Adjusted Life Years model (discussed in Chapter 5: Findings), used in health-care to place values on the state of health following medical intervention (see 5.3 Additional factors), it was possible to attach values to staff development, networking activities, as well as the retention rate of Access students attributable to the quality assurance mechanisms. This innovative approach to valuing factors resulting from quality assurance processes was welcomed by the various actors involved in the work as it helped to 'unpack' some of the cost and benefit areas more explicitly than before. This highlighted that there were benefits above and beyond the immediately financial for HEIs participating in Access Course validation. However, the value placed upon them could change across institutions and even within them. Compounding this was the fact that some AVAs quality assurance mechanisms provided 'better' returns on investment than others. A focus by HEIs on the return on investment offered by participation in the external mechanisms - brought about by factors including the squeeze on funding and student numbers, had facilitated a more detailed appreciation of the value of the external mechanisms by the HE participants involved with the research work. The model presented a useful management development tool for the HE practitioners by explicitly highlighting cost and benefit areas associated with their participation in the quality assurance mechanisms of Access Courses.

Some of the FE participants in the research had developed their own Decision Support Systems for all types of educational provision based on factors similar to those used in the model. However, these models, in the main, focussed strictly on income and expenditure factors and did not consider the wider environmental influences. However, one further education college representative expressed great interest in developing a mechanism within its elaborate, essentially quantitative, model that would embrace qualitative, or less immediately financially comparable factors.

6.4.5 The case studies chosen

To create a model capable of more general application it was important that the chosen courses reflected the diversity of provision in Access education and enabled a detailed examination of each factor in a 'real' and different situation. This proved to be a successful approach and facilitated a critical evaluation of the model as it developed, since practitioners and managers (i.e. the potential users) were able to provide continuous feedback on whether the results made sense in their particular case.

With the advent of unitization of Access Courses (where the 'course' is made up of individual 'units' of provision consisting of around 30-60 hours of study) the adaptability of the model has been tested. It has been possible to examine a particular unit of provision and apply the conventions/principles of the model. The values require alterations but essentially the model remains the same. Other contexts into which the model could be transferred include adult education (AE) programmes within universities. The principle stakeholders involved in this type of AE model would be the students, their employers/society, and the HE providing institution. Many of the cost and benefit factors developed for the Access model would apply here. Work-based training programmes and unemployment training programmes (Green, Mace & Steedman, 1993) are other areas in which the model could be utilised, although this would require further research since other factors such as the type, length, duration and outcomes of such training provision would come into play which have not been examined here. Nevertheless, in principle new factors can be added.

Since the research began in 1994, the educational environment has noticeably changed. The introduction of fees for HE study may effect the number of learners enrolling onto full-time HE provision. This has implications for the model as more students undertake part-time study alongside work in order to pay for their higher education programme of study. At present the model is constructed around a full-time mode of study - at both the Access Course level and the degree (or other HE programme) level. To accommodate part-time study would involve changing variables in the model such as, for the learner, the length of time required to complete the course(s), the earnings foregone resulting from studying part-time and, perhaps,

the benefit of earning while learning. For the providing institution it would involve changes in variables such as contact hours and may, if part-time Access Course study is seen as a marginal activity, reduce the teaching and associated costs.

6.4.6 The quality assurance chain of causation

The research has shown that the external quality assurance activities have distinct cost and benefit implications for the actors involved with the project. However, the magnitude, in terms of direct effect, of these cost-benefit implications can vary considerably. Effectively there exists an external quality assurance 'chain of causation', as put forward in Chapter 5: Findings, along which the factors are placed. Data from this research shows that the added benefit, in terms of staff development from hours of exposure to the external quality assurance mechanisms, ranges from 5 hours for staff members experienced in quality assurance processes and issues, to 40 hours for those who are less experienced. This shows that benefits in terms of staff development for experienced staff are only marginally the result of the external quality assurance mechanisms of Access Courses but they are more beneficial to less experienced staff. Figure 6:1 shows the quality assurance 'chain of causation' for Access Courses using the benefit factor of staff development.

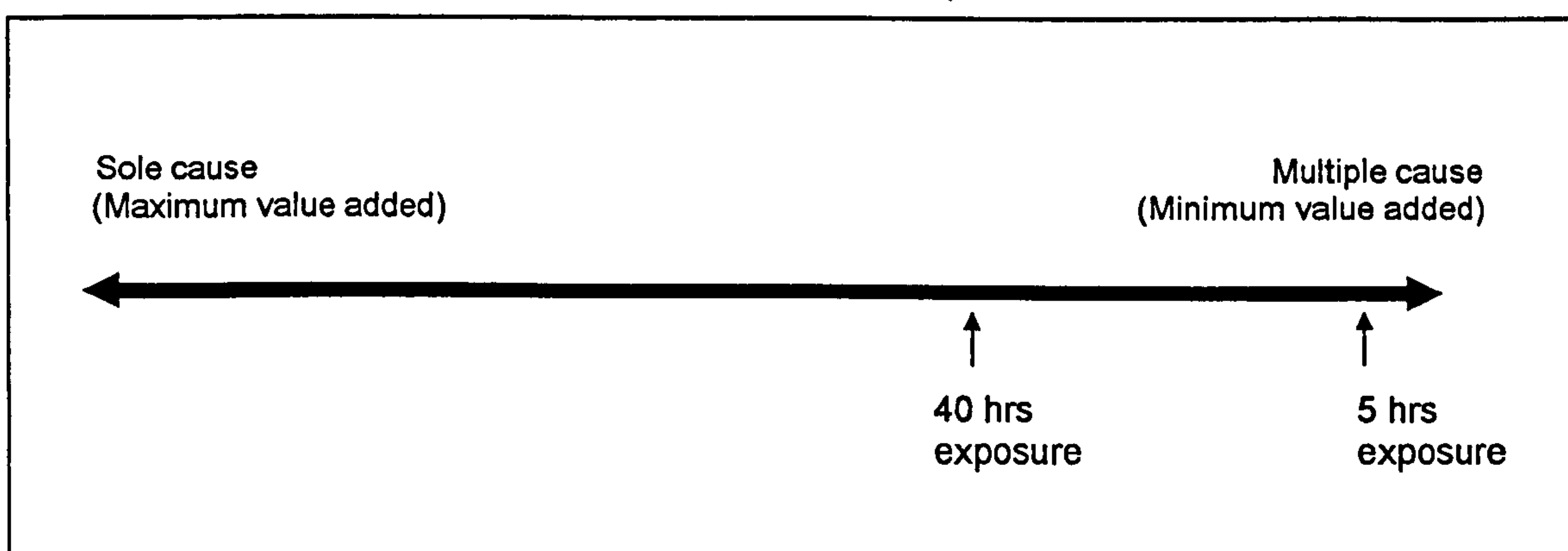


Figure 6:1 External quality assurance mechanisms - effect on staff development (number of hours of exposure)

This models the process in which HE staff members who are less experienced in quality assurance processes and curriculum development gain the maximum value added. A further example would be that of graduate earnings attributable to the external quality assurance mechanisms. Because this is such a contentious issue a conservative 60% of the anticipated graduate earnings attributable to the Access Course has been used (see Figure 6:2, below). This shows that the remaining 40% is as a result of other influences (such as, perhaps, innate ability, links between the Access Course provider and the HEI etc.).

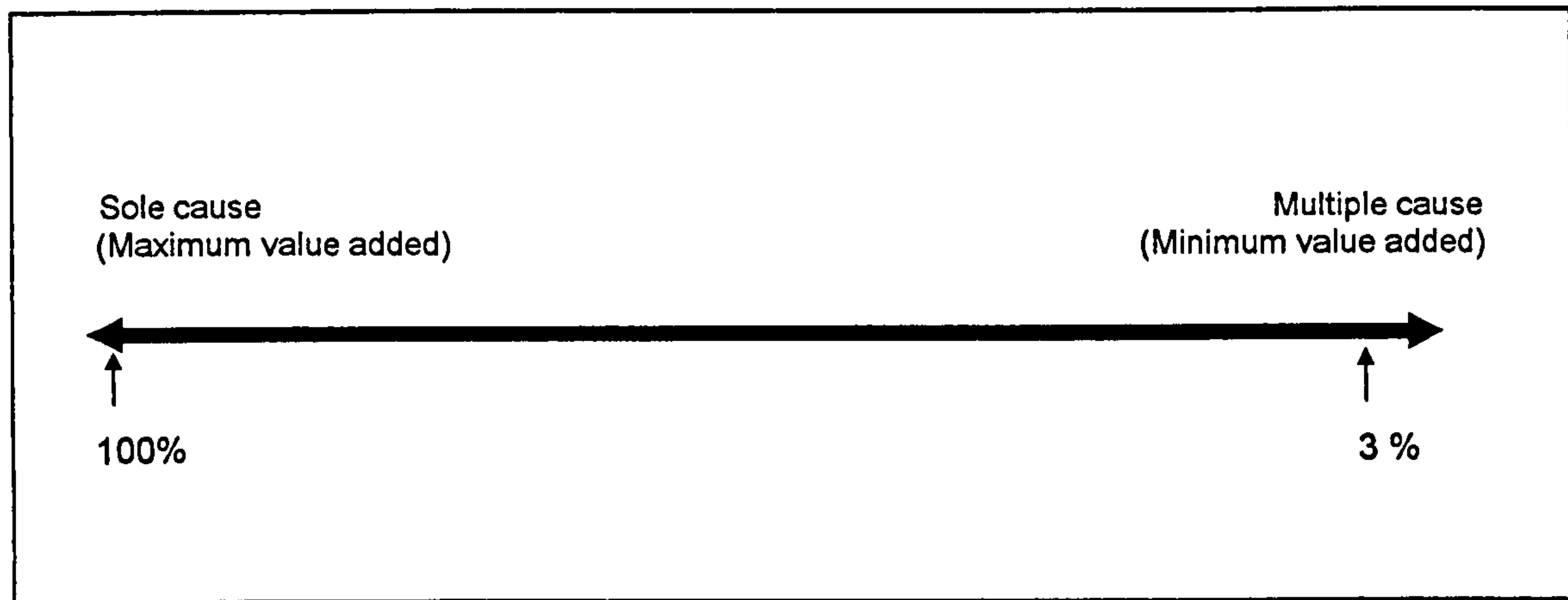


Figure 6:2 External quality assurance mechanisms - graduate earnings

Figures 6:1 and 6:2 show that the external quality assurance mechanisms contribute some beneficial effect to the subjects or actors concerned. However, they also highlight the complexity of measuring and distinguishing the magnitude of the effect of the external quality assurance mechanisms. Many of those interviewed as part of the research found great difficulty in determining the level of benefit attributable to the external (AVA) quality assurance mechanisms, and that attributable to other influences. Chapter 5: Findings - Additional factors, attempted to address this problem and, whilst welcomed by the participants of the research, it was based on a small number of responses and was not easily converted to a financial value.

An additional point to note here is that since the beginning of the research, the focus or location of the quality assurance mechanisms/procedures has changed. In 1994, when the work began, FE colleges, the major providers of Access Courses, were in the early stages of developing their own quality assurance arrangements. Previously, before incorporation, they were subject

to greater and more frequent inspection from their funding bodies. Therefore, it could be suggested that the value of the external quality assurance mechanisms provided by the Access Course's AVA was greater than it is now, as colleges are more advanced with their own, internal quality assurance arrangements. This would have had an effect upon the model as many of the factors or variables identified may be further or solely affected by internal, providing institution based, quality assurance mechanisms. The additional value of the external quality assurance mechanisms may therefore be minimal. Anecdotal evidence, from practitioners in providing institutions has indicated a view that their quality assurance effort is being replicated in order to satisfy the AVA. This has cost and benefit implications that are not factored in the model.

6.4.7 The focus of the model

The model concentrated on the effects of the external quality assurance mechanisms of three groups. It may therefore appear limited in its scope as it only seeks data for these key stakeholder groups. However, it has been argued that these groups are affected in terms of costs and benefits more than almost any other by the external quality assurance mechanisms and therefore deserve examination. As a result of this approach the work has concentrated on the private returns, to these stakeholder groups, gained through participation in the external quality assurance mechanisms. The wider, social, returns have not generally been factored - although these have factored in studies elsewhere (Steel & Sausman, 1997). Work conducted by, and on behalf of, the National Committee of Inquiry into Higher Education (The Dearing Committee) suggested that attention was focusing on the private returns students received from education (HE in particular). The work had as one of its main themes, a focus on who would pay for students' tuition fees and maintenance costs. It recommended, drawing on a accompanying report (Steel & Sausman, 1997) that students should help pay for tuition following a consideration of the private rates of return they achieved through HE. These additional costs can be incorporated into the student cost-benefit model detailed in Chapter 5: Findings.

It has been shown that the external quality assurance mechanisms involved with Access provision can be costly in relation to the benefits they generate. The providing institutions appear to bear the most cost for quality assurance, with students and higher education benefiting the most. On the face of it, many providing institutions gain relatively little from the external quality assurance mechanisms. For most, they are considered a necessary evil required in order to secure funding. Even when funding is secured, the model shows a net cost for some case study courses. The conclusion to be drawn from this situation is that benefits beyond the immediately or overtly financial have some importance for the providing institution. Otherwise, why would they participate in an activity in which they are making a substantial loss? It may be useful for more research to be conducted here which examines more closely these hidden factors.

Finally, the examination of the effects, in terms of costs and benefits, of Access provision and its associated quality assurance mechanisms have highlighted the differences that occur within stakeholder groups. For the providing institutions and HEIs involved, adequate representative data were collected to indicate these differences. However, little data is available which unpacks the differences between the outcomes of traditional students and their Access Course counterparts. Major national survey work needs to be done to explore the differences in outcome that may emerge for typically disadvantaged learners who have traditionally studied on Access Course programmes.

Appendix 1: Research proposal

Draft Project Proposal

COST/BENEFIT ANALYSIS OF QUALITY ASSURANCE MECHANISMS IN ADULT AND CONTINUING EDUCATION

Introduction

In recent years, the issue of quality in adult, continuing and higher education has risen to the top of the political and academic agenda. As a consequence, quality assurance mechanisms have been developed in order to monitor the quality of educational provision and the institutional management structures and processes which support and validate that provision. These mechanisms now exist at a number of different levels: institutional, consortium, regional and national. A number of different models have developed with a variety of names depending on context, application, purpose and philosophy: audit, validation, accreditation, appraisal, peer group review, quality circles and so on. Some of these are new; some have been in place for a considerable length of time but may be undergoing modification. All are endeavouring to define quality and formulate ways of monitoring and improving it. The cost of these procedures often seems excessive especially when they are new, although we are not yet clear precisely what the costs are and how to measure them. Just as importantly, we are not clear what the benefits of the various quality assurance mechanisms are, and how to measure them. This project will seek to address these questions by examining the various models of quality assurance which have been developed by Authorised Validating Agencies (AVAs) within the national framework for the recognition of Access Courses. From this an attempt will be made to develop a generalisable model and to test this in the context of university continuing education provision.

Background: quality assurance for Access Courses

In 1989, the then DES invited CNAAC and CVCP to set up a national framework for the recognition of Access. Since then what has emerged is a three tier devolved system of local agencies authorised by a central body to validate courses:

Access Courses Recognition Group (ACRG)*
(A national committee of representatives of universities,
polytechnics, further education, LEAs, CVCP, CNAAC, CDP)

Authorised Validating Agencies (AVAs)
(local groups usually made up of HE and FE institutions -
total number of AVAs - 40)

Access Course Providers
(usually FE colleges - total number of courses approved
July 1993 - approx. 750)

*Now part of the Higher Education Quality Council (HEQC), Division of CATS and Access

The central body, ACRG, has a system of quality assurance for the AVAs consisting of initial approval and the granting of a licence, with subsequent periodic review. AVAs have systems of quality assurance for Access Courses consisting of initial approval, annual monitoring and periodic review. Courses approved through these arrangements are awarded a national kitemark of recognition intended to provide national currency and credibility.

ACRG adopted the principle of 'lightness of touch' and devolved responsibility so that the organisational structures and procedures of AVAs are very diverse. They range from the procedures of Open Colleges which operate within the National Open College Network (NOCN) and which accredit a range of other provision besides Access programmes, at a number of different levels and provide a number of other services, to those which themselves take a 'light of touch' approach and confine their activities to the validation of Access Courses.

In parallel to the development of this range of models, interesting questions have arisen about the relative costs and benefits of the different practices, particularly as there is also great diversity in the operating budgets of AVAs. Such questions have acquired greater significance as the budgets have come under increasing pressure arising from recent education reform acts. These questions are however, extremely complex. While the costs of the operations are relatively easy to identify and can be (although rarely are) fully measured in monetary values, the benefits are more problematic. While some benefits may be clear, others may not be obvious; they may appear at different levels and over differing time scales; they may be direct or indirect; they may be intended or unintended; they may vary between individuals and groups; there may not be a consensus about benefits obtained from a particular set of procedures. It should also be noted that while it may be possible to attach a monetary values to some of the outcomes of the quality assurance mechanisms, there may be others which cannot be measured in comparable terms.

Background: developments in university adult and continuing education

The new Higher Education Funding Council for England (HEFCE) has undertaken a review of the funding of continuing education provision and has indicated that radical changes will be implemented in the future. Although the precise details have not been announced, it is clear that for the 'old' universities a major programme of accreditation of adult and continuing education provision will need to be put in place. The nature of the provision and the demands of client groups make this a difficult problem. It may be that a number of different mechanisms are required for different students and the various levels and types of courses. It will also be essential to minimise the costs and maximise the benefits of whatever procedures are developed. This project will be timely to inform these developments.

Aims and objectives

The aim of the project is to conduct a cost/benefit analysis of a number of different quality assurance mechanisms within the national framework for the recognition of Access Courses, in order to develop a more generalisable methodology which might be useful in other contexts.

Objectives

1. To identify, and where possible quantify, the costs associated with a number of different arrangements for quality assurance within the national framework for the recognition of Access Courses.
2. To identify, and where possible quantify, the benefits associated with the different arrangements.
3. To develop an understanding of the relationship between costs and benefits in the different arrangements.
4. To develop a model of the way in which costs and benefits might interact in quality assurance mechanisms.
5. To test the model in the context of university adult and continuing provision.

Methods

The project will employ a range of qualitative and quantitative approaches and will endeavour to work collaboratively with practitioners in the field. Case studies will be undertaken in five AVAs to develop a model and two university departments of adult and continuing education will be involved in the testing of the model. The work will be undertaken in four stages over the period January 1994 to June 1996.

Stage 1 - January to June 1994

- *Literature review and interviews with practitioners at all levels in the case study AVAs to develop a qualitative analysis of the costs and benefits of the operation of the quality assurance arrangements.
- *Development of a qualitative model of the relationship between costs and benefits and the way in which they interact.

Stage 2 - July 1994 to June 1995

- *Identification of the costs and benefits which can be quantified and those which cannot.
- *Development of a methodology for quantifying the various factors.
- *Development of a quantitative model.

Stage 3 - July to December 1995

- *Testing of the model in the case study AVAs and others not involved in stage 1.
- *Modification of the model as appropriate and evaluation of its strengths and weaknesses.

Stage 4 - January 1996 to March 1996

- *Testing of the model in two university departments.
- *Modification as appropriate and evaluation of strengths and weaknesses.

Stage 5 - April to June 1996

- *Writing up of final report

Outcomes

1. A qualitative and quantitative cost/benefit analysis of a range of quality assurance arrangements operating within the national framework for the recognition of Access programmes and in university adult and continuing education departments.
2. A proposed model for evaluating quality assurance mechanisms in qualitative and quantitative terms.
3. Progress reports at the end of each stage of the project and at a final report on completion.
4. Dissemination of the findings and methods through on-going collaboration and through events at appropriate stages during the project.

Project management

The project will be based at the Continuing Education Research Unit at City University and supervised by Pat Davies (Director of Research Unit), Stella Parker (Head of Department) and Peter Roberts (Visiting Professor, Department of Systems Science).

An Advisory Group will be established consisting of representatives from HEQC, AVAs, UCACE, University CE departments, project supervisors, and others as appropriate (e.g. funding agents).

It is proposed that a full time researcher will be employed for three years to carry out the work. The researcher will register for a Ph.D. at City University. The project will be funded in the first year by City University but external funding will be sought for the second and third years.

Pat Davies

Appendix 2: Project Advisory Group

This group met on an ad hoc basis throughout the initial stages of the project.

Group members assisted with the selection of appropriate AVAs/Access Courses within the National Framework. Background information regarding issues and concerns within the Access field were also provided by the group.

The group consisted of:

Dr Pat Davies (Dept. of Continuing Education, City University)

Professor Peter Roberts (Visiting Professor, Systems Science, City University)

Jane Storr (Chief Executive, West and North Yorkshire Access Network)

Ailsa Herbert (Chief Executive, Hertfordshire Access Consortium)

Sue Peddar (Chief Executive, London Open College Federation)

Dr Philip Jones (Assistant Director (Quality Assurance), Higher Education Quality Council)

David Wilkinson (Project Officer)

Appendix 3: Outline of project work

Project Outline:

Cost-benefit Analysis of Quality Assurance Mechanisms in Access and Continuing Education

This project, undertaken as part of a Ph.D. at City University, seeks to analyse a range of quality assurance mechanisms used in access and continuing education in order to develop an evaluative tool for practitioners and policy-makers.

The aim of the research is to assess the relative costs and benefits of a number of quality assurance mechanisms within the national framework for the recognition of Access courses and to develop a generalisable model with the potential for wider application. This will be achieved through a four-stage process:

1. An identification of the costs and benefits associated with a number of different arrangements for quality assurance within the national framework for the recognition of Access courses;
2. An analysis of the relationship between the costs and the benefit;
3. The development of a model that highlights the way in which the costs and benefits might interact in quality assurance mechanisms;
4. The testing of the model in the context of university adult and continuing education provision.

In order to achieve the above the project will employ a range of qualitative and quantitative approaches and will endeavour to work collaboratively with practitioners in the field. Case studies will be undertaken in a number of Authorised Validating Agencies (AVAs) within the national framework for the recognition of Access courses. This will provide a model that shall be tested in a different context, namely the new arrangements developed in university adult and continuing education for the accreditation/certification of courses for adults.

The anticipated outcomes of the research are as follows:

- A qualitative and quantitative cost-benefit analysis of a range of quality assurance arrangements operating within the national framework for the recognition of Access programmes and in university adult and continuing education departments.
- A model for evaluating quality assurance mechanisms in both qualitative and quantitative terms which could be used in other contexts.
- Progress reports at the end of each stage of the project and at a final report on completion.
- Dissemination of the findings and methods through on-going collaboration and through events at appropriate stages during the project.

Comments and requests for further information to:

David Wilkinson (Project Officer), Continuing Education Research Unit, City University,
Northampton Square, London EC1V OHB

TEL: 0171-477-8000 extension 3266 FAX: 0171-477-8256

Student Questionnaire - Your thoughts on Access

The aim of this research, undertaken as part of a Ph.D at City University, is to assess the costs and benefits of the quality assurance mechanisms in Access and continuing education.

The quality assurance mechanisms involved with Access courses ensure, among other things, that the programme is reaching its target group, has a good mix of 'class' or 'contact' hours and that the students have access to appropriate resources. Some of the following questions require your opinion on these.

As an 'Access student' your views are very important to my work and I would be grateful if you could spare a few minutes to fill out this questionnaire. Please be as frank as possible with your responses.

If you would like any further information, or wish to comment on the research work a contact address is provided at the end of this document.

Thank you.

David Wilkinson - Project Officer

Question 1 :

Office Use:

1

What is your date of birth? Day ____ Mnth ____ Year ____

Please tick the box that most accurately describes you:

Question 2 :

Sex:

Male

☐

2

Female

☐**Question 3**

Marital status:

Single

☐

3

Married/co-habiting

☐

Remarried/co-habiting following divorce/separation

☐

Widowed

☐

Separated

☐

Divorced

☐**Question 4 :**

Classification as per Census requirements:

White

☐

4

Black Caribbean

☐

Black African

☐

Black other

☐

Indian

☐

Pakistani

☐

Bangladeshi

☐

Chinese

☐

Other (please specify below)

☐**Question 5 :**What do you feel about your timetabled **class hours** for SUBJECT MODULES (not including tutorials, workshops or directed study)?

5a

Too few

☐

Too many

☐

Adequate

☐

Please comment (on the answer given above):

5b

Are these hours suitable/do they fit in with any other commitments you may have:

Yes

☐

5c

No

☐

Please comment (on the answer given above):

5d

Question 6 :

What do you feel about your timetabled **class hours** for SUPPORT MODULES (this includes tutorial sessions, directed study workshops and study skills)?

Too few

☐

6a

Too many

☐

Adequate

☐

Please comment (on the answer given above):

6b

Are there any informal meetings with tutors (outside these hours)?

Yes

☐

6c

No

☐

Please comment (on the answer given above):

6d

Question 7 :

Because of your studies do you have any needs in terms of crèche support?

7a

Yes

☐

No

☐

**If 'No' go
to
question
8**

If 'Yes' please specify below:

7b

If you have crèche requirements can these be met by the institution?

Yes

☐

No

☐

7c

If 'No' what child-care facilities do you use? Please specify below:

7d

Question 8 :

Do you use any of the following facilities (these are *in addition* to your timetabled sessions)?

8a

Study skills

Yes

☐

No

☐

If 'Yes' for what specific purpose(s)? Please specify below:

8b

Do you use the Library (for study purposes)

Yes

☐

No

☐

8c

Do you use the Library (for borrowing purposes)

Yes

☐

No

☐

8d

Do you use the computing facilities

8e

Yes

☐

No

☐

If 'Yes', for what specific purpose(s)? Please specify below:

8f

Do you use numeracy workshops

8g

Yes

☐

No

☐

If 'Yes', for what specific purpose(s)? Please specify below:

8h

Do you use language support

8i

Yes

☐

No

☐

If 'Yes', for what specific purpose(s)? Please specify below:

8j

Do you use any other forms of learning support

8k

Yes

☐

No

☐

If 'Yes', please specify the form this took below:

8l

Do you use the careers guidance service

Yes

☐

8m

No

☐

If 'Yes', for what specific purpose(s)? Please specify below:

8n

8o

Do you use any personal guidance facilities

Yes

☐

No

☐

8p

If 'Yes' for what specific purpose(s)? Please specify below:

Do you have any other requirements (such as wheelchair access/large print books from the library/special dietary requirements of the refectory)

Yes

☐

No

☐

**If 'No' go
to
question
8b**

If 'Yes' could you please state what these are below:

8q

8r

Are these requirements provided for by the institution

Yes

☐

No

☐

8s

Question 8b:

If you do not use any of the above facilities (*in question 8*) is there a reason for this? Please specify below:

8t

Question 9 :

What do you expect to be doing 12 months from completion of your Access course?: (please tick **one** box)

Going into employment

☐

9a

Please elaborate below:

9b

Going into higher ed.

☐

9c

Please elaborate below:

9d

Continuing in Further Ed.

☐

9e

Please elaborate below:

9f

Other (Please specify)

☐

9g

9h

Please elaborate below:

9i

Question 10 :

List below, in order of importance to you, the five 'things' (outcomes / benefits), either expected or unexpected, you personally have got out of the course. For example, you may become more self-confident as a result of doing the course. don't worry if you cannot list five, just list as many as you can but remember to put the most important first and so on.

1)

10a

2)

10b

3)

10c

4)

10d

5)

10e

Question 11 :

List below, again in order of importance to you, the five most important 'costs' of doing the course - 'cost' in this sense does not necessarily mean 'cost in money' but can equally mean 'cost in time'. For example, 'costs' could include the amount of money you spend on stationery, the 'cost' of not being able to go out with your mates or spend time with your family (because you have to study). Again, don't worry if you cannot think of five, just list as many as you can in order of importance.

1)

11a

2)

11b

3)

11c

4)

11d

5)

11e

Question 12 :

I would like to be able to contact you again in September/October to monitor progression routes of Access students. I would therefore be grateful if you would supply a contact address for the beginning of the next academic year (September/October time). This information will be used **only** for the research and will not be divulged to anyone else. (Please use block capitals)

Name	_____	12a
Address	_____	12b
	_____	12c
	_____	12d
	_____	12e
Telephone No.	_____	12f

Thank you very much for taking the time to complete this questionnaire. Any comments and requests for further information should be addressed to:

David Wilkinson - Project Officer
Continuing Education Research Unit
Department of Continuing Education
City University
Northampton Square
London
EC1V OHB

Tel. 0171-477-8000 extension 3266

Fax: 0171-477-8256

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Appendix 5: The model

Case A: Providing institution factors			
Validation/Recognition:			
AVA membership	£ -	Panel meeting catering	£ 75
Recognition	£ 500	Hours at panel	5
Registration/Certification*	£ 33	No. of moderators	3
No. present at panel	12	Moderators fee	£ 150
Panel meeting room	£ -	Avg staffing costs/hr**	£ 80
Course development:			
No. of course documents	15	Administrative staff	1
Cost per document	£ 2	Admin. staff cost per hour	£ 6
Teaching staff	12	Hours spent on development	10
Hours spent at panel	8.5	Management staff	3
Student registration fee	£ -	Management staff cost per hour	£ 80
		Hours spent on development	4
Funding:			
Student enrolments	45	Funding unit price	20
Student completions	38	Total funding units gained	3800
Institutional staffing costs (p.a.)	£12,000,000	No. of fee paying students	0
Institutional teaching hours (p.a.)	150000	Course fee amount	0
Programme teaching hours	799		
Overhead costs	£ 4,000,000		
Discounted Net Benefit: Quality Assurance mechanisms			-£ 39,844
Discounted Net Benefit: Access Course			£ 33,184

* Per student **Per panel member

Case A: Student factors			
Course fees	£ -	Travel allowance	£ -
Travel (year)	£ 122	Other allowances	£ 1,229
Equipment (year)	£ 50	Graduate earnings	£ 16,725
Crèche (year)	£ 204	Course registration fee	£ -
Discounted Net Benefit: Quality Assurance mechanisms			£ 40,829
Discounted Net Benefit: Access Course			£ 68,901

Case A: Higher Education factors			
AVA membership	£ 200	Time spent moderating	12
No. of representatives at panel	1	Students accepted to HE institution	13
Average earnings for representatives	£ 60	Funding per student	£ 2,200
Time at panel	5	Moderation fee income	£ 150
Time spent in preparation for panel	1.5	National Framework operating costs	£ 100,000
No. of Access students with certificate	20489		
Discounted Net Benefit: Quality Assurance mechanisms			£ 205,098

Case C: Cost and Benefit calculations (Providing Institution)											
Factor	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Access Course Costs:											
Course Provision	£ 70,375	£ 70,375	£ 70,375	£ 70,375	£ 70,375	£ 70,375	£ 70,375	£ 70,375	£ 70,375	£ 70,375	
Access Course Benefits:											
Funding	£ 31,215	£ 32,315	£ 33,454	£ 34,634	£ 35,854	£ 37,118	£ 38,427	£ 39,781	£ 41,184	£ 42,635	
Fees	£ 1,190	£ 1,190	£ 1,190	£ 1,190	£ 1,190	£ 1,190	£ 1,190	£ 1,190	£ 1,190	£ 1,190	
Registration	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	
Net Benefit: Access Course	£ 37,970	£ 36,870	£ 35,731	£ 34,551	£ 33,331	£ 32,067	£ 30,758	£ 29,404	£ 28,001	£ 26,550	
Discounting ratio	1	0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51316	0.46651	0.42410	
Discounted Net Benefit: Access Course	£ 37,970	£ 33,518	£ 29,530	£ 25,959	£ 22,766	£ 19,911	£ 17,362	£ 15,089	£ 13,063	£ 11,260	
Net Present Value: Access Course	£ 226,427										
Quality Assurance mechanisms Costs:											
AVA membership	£ 200	£ 205	£ 210	£ 215	£ 221	£ 226	£ 232	£ 238	£ 244	£ 250	
Recognition	£ 500					£ 513					
Registration/Certification	£ 1,125	£ 1,182	£ 1,242	£ 1,305	£ 1,371	£ 1,440	£ 1,513	£ 1,590	£ 1,670	£ 1,755	
Number present at panel	6					6					
Panel staffing	£ 2,288					£ 2,465					
Panel meeting room	£ -					£ -					
Panel meeting catering	£ -					£ -					
Hours at panel	4					4					
Moderators fee	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	
Course documentation	£ 80					£ 84					
Teaching staff (development)	£ 5,722					£ 6,161					
Administrative staff (development)	£ 70					£ 75					
Management costs (development)	£ 381					£ 411					
Quality Assurance mechanisms Benefits:											
Net Benefit: Quality Assurance mechanisms	£ 10,366	£ 1,387	£ 1,452	£ 1,520	£ 1,592	£ 11,374	£ 1,745	£ 1,828	£ 1,914	£ 2,005	
Discounting ratio	1	0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51316	0.46651	0.42410	
Discounted Net Benefit: Quality Assurance mechanisms	£ 10,366	£ 1,261	£ 1,200	£ 1,142	£ 1,087	£ 7,062	£ 985	£ 938	£ 893	£ 850	
Net Present Value: Quality Assurance mechanisms	£ 25,785										

Net Benefit: Access Course = Net Benefit of Access Course (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Access Course = Net Benefit of Access Course x Discount ratio

Net Present Value: Access course = sum of discounted net benefits

Net Benefit: Quality Assurance mechs. = Net Benefit of Quality Assurance procedures (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Quality Assurance mechanisms = Net Benefit of QA x Discount ratio

Net Present Value: Quality Assurance mechanisms = sum of discounted net benefits

Case A: Cost and Benefit calculations (Students)										
Factor	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Access Course Costs:										
Course Fees	£ -									
Course registration fee	£ -									
Travel	£ 122									
Equipment	£ 50									
Crèche	£ 204									
Access Course Benefits:										
Travel allowances	£ -									
Other allowances	£ 1,229									
Percentage of graduate earnings	£ -				£ 10,035	£ 10,286	£ 10,543	£ 10,807	£ 11,077	£ 11,354
Net Benefit: Access Course	£ 853				£ 10,035	£ 10,286	£ 10,543	£ 10,807	£ 11,077	£ 11,354
Discounting ratio	1	0.909091	0.826446	0.751315	0.68301346	0.62092132	0.56447393	0.51315812	0.46650738	0.42409762
Discounted Net Benefit: Access Course	853	0	0	0	6854.04002	6386.71911	5951.26099	5545.4932	5167.39139	4815.06925
Net Present Value: Access Course	£ 68,902									
Quality Assurance mechanisms Costs:										
Quality Assurance mechanisms Benefits:										
Percentage of graduate earnings attributable to the Access Course										
Net Benefit: Quality Assurance mechanisms					£ 6,021	£ 6,172	£ 6,326	£ 6,484	£ 6,646	£ 6,812
Discounting ratio	1	0.909091	0.826446	0.751315	0.68301346	0.62092132	0.56447393	0.51315812	0.46650738	0.42409762
Discounted Net Benefit: Quality Assurance mechanisms	£ -	£ -	£ -	£ -	£ 4,112	£ 3,832	£ 3,571	£ 3,327	£ 3,100	£ 2,889
Net Present Value: Quality Assurance mechanisms	£ 40,829									

Net Benefit: Access Course = Net Benefit of Access Course (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Access Course = Net Benefit of Access Course x Discount ratio

Net Present Value: Access course = sum of discounted net benefits

Net Benefit: Quality Assurance mechs. = Net Benefit of Quality Assurance procedures (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Quality Assurance mechanisms = Net Benefit of QA x Discount ratio

Net Present Value: Quality Assurance mechanisms = sum of discounted net benefits

Case A: Cost and Benefit calculations (Higher Education Institution)										
Factor	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Quality Assurance mechanisms Costs:										
AVA membership	£ 200	£ 205	£ 210	£ 215	£ 221	£ 226	£ 232	£ 238	£ 244	£ 250
Number of representatives at panel	1									
Average earnings per hour for representatives	£ 60	£ 62	£ 63	£ 65	£ 66	£ 68	£ 70	£ 71	£ 73	£ 75
Time at panel	5					5				
Time spent in preparation and at panel	£ 390					£ 348				
Time moderating	£ 720	£ 756	£ 795	£ 835	£ 877	£ 922	£ 968	£ 1,017	£ 1,069	£ 1,123
National framework	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45
Quality Assurance mechanisms Benefits:										
Funding for students accepted	£ 28,600	£ 29,315	£ 30,048	£ 30,799	£ 31,569	£ 32,358	£ 33,167	£ 33,996	£ 34,846	£ 35,717
Moderation expenses	£ 150	£ 154	£ 158	£ 162	£ 166	£ 170	£ 174	£ 178	£ 183	£ 187
Net Benefit: Quality Assurance mechanisms	£ 27,377	£ 28,444	£ 29,137	£ 29,847	£ 30,573	£ 30,968	£ 32,078	£ 32,857	£ 33,653	£ 34,469
Discounting ratio	1	0.90909091	0.82644628	0.7513148	0.68301346	0.62092132	0.56447393	0.51315812	0.46650738	0.42409762
Discounted Net Benefit: Quality Assurance mechanisms	£ 27,377	£ 25,858	£ 24,080	£ 22,424	£ 20,882	£ 19,229	£ 18,107	£ 16,861	£ 15,699	£ 14,618
Net Present Value: Quality Assurance mechanisms	£ 205,098									

Net Benefit: Quality Assurance mechs. = Net Benefit of Quality Assurance procedures (benefit - cost)
 Discounting ratio = 10%
 Discounted Net Benefit: Quality Assurance mechanisms = Net Benefit of QA x Discount ratio
 Net Present Value: Quality Assurance mechanisms = sum of discounted net benefits

Case A: Increment chart									
	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	
Number of representatives (providing institution) at panel %						12.30			
Moderators % (1)	3	3	3	3	3	3	3	3	3
Moderators fee %	153.75	157.59	161.53	165.57	169.71	173.95	178.30	182.76	
Hours spent on moderation %	12.30	12.61	12.92	13.25	13.58	13.92	14.26	14.62	
Course documents %					15.38				
Course documents price %					2.05				
Teaching staff %					12.30				
Hours spent on development %					8.71				
Average earnings per hour %					82.00				
Administrative staff %					1.03				
Administrative cost per hour %					6.15				
Hours spent on development (admin) %					10.25				
Management staff %					3.08				
Management cost per hour %					82.00				
Hours spent on development (management) %					4.10				
Programme teaching hours %	799.00	799.00	799.00	799.00	799.00	799.00	799.00	799.00	
Staff costs %	12,300,000.00	12,607,500.00	12,922,687.50	13,245,754.69	13,576,898.55	13,916,321.02	14,264,229.04	14,620,834.77	
Teaching hours %	153,750.00	157,593.75	161,533.59	165,571.93	169,711.23	173,954.01	178,302.86	182,760.43	
Overheads %	4,100,000.00	4,202,500.00	4,307,562.50	4,415,251.56	4,525,632.85	4,638,773.67	4,754,743.01	4,873,611.59	
Student registration fee %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Enrolments %	46.13	47.28	48.47	49.68	50.92	52.19	53.50	54.83	
Funding unit price %	20.50	21.01	21.54	22.08	22.63	23.19	23.77	24.37	
Funding units %	3,895.00	3,992.38	4,092.18	4,194.49	4,299.35	4,406.83	4,517.01	4,629.93	
Course fee %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fee payers %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Hours at panel %					5.13				
HE representatives earnings per hour %	61.50	63.04	64.61	66.23	67.88	69.58	71.32	73.10	
HE representatives at panel %	1	1	1	1	1	1	1	1	
Students at HE institution %	13	13	13	13	13	13	13	13	
HE funding per student %	2,255.00	2,311.38	2,369.16	2,428.39	2,489.10	2,551.33	2,615.11	2,680.49	
Graduate earnings %	0.00	0.00	0.00	0.00	17,143.00	17,571.58	18,010.86	18,461.14	
Registration/Certification %	33.83	34.68	35.54	36.43	37.34	38.28	39.23	40.21	
Access students with certificate %	21,001.00	21,526.03	22,064.18	22,615.78	23,181.17	23,760.70	24,354.72	24,963.59	
National Framework operating costs %	102,500.00	105,062.50	107,689.06	110,381.29	113,140.82	115,969.34	118,868.58	121,840.29	

Case B: Providing institution factors			
Validation/Recognition:			
AVA membership	£ 2,000	Panel meeting catering	£ 75
Recognition	£ 300	Hours at panel	6
Registration/Certification*	£ -	No. of moderators	1
No. present at panel	3	Moderators fee	£ 150
Panel meeting room	£ -	Avg staffing costs/hr**	£ 86.09
Course development:			
No. of course documents	15	Administrative staff	1
Cost per document	£ 6	Admin. staff cost per hour	£ 5
Teaching staff	3	Hours spent on development	10
Hours spent at panel	6	Management staff	3
Student registration fee	£ -	Management staff cost per hour	£ 86.09
		Hours spent on development	6
Funding:			
Student enrolments	15	Funding unit price	23.32
Student completions	12	Total funding units gained	1323
Institutional staffing costs (p.a.)	£ 8,858,143	No. of fee paying students	7
Institutional teaching hours (p.a.)	102897	Course fee amount	606
Programme teaching hours	612		
Discounted Net Benefit: Quality Assurance mechanisms			-£ 24,574
Discounted Net Benefit: Access Course			-£ 74,322

* Per student **Per panel member

Case B: Student factors			
Course fees	£ 606	Travel allowance	£ -
Travel (year)	£ 122.40	Other allowances	£ 1,229
Equipment (year)	£ 50	Graduate earnings	£ 16,725
Crèche (year)	£ -	Course registration fee	£ -
Discounted Net Benefit: Quality Assurance mechanisms			£ 40,829
Discounted Net Benefit: Access Course			£ 68,499

Case B: Higher Education factors			
AVA membership	£ 200	Time spent moderating	12
No. of representatives at panel	1	Students accepted to HE institution	5
Average earnings for representatives	£ 60	Funding per student	£ 2,200
Time at panel	6	Moderation fee income	£ 150
Time spent in preparation for panel	1.5	National Framework operating costs	£ 100,000
No. of Access students with certificate	20489		
Discounted Net Benefit: Quality Assurance mechanisms			£ 74,565

Case B: Cost and Benefit calculations (Providing Institution)											
Factor	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Access Course Costs:											
Course Provision	£ 52,686	£ 52,686	£ 52,686	£ 52,686	£ 52,686	£ 52,686	£ 52,686	£ 52,686	£ 52,686	£ 52,686	
Access Course Benefits:											
Funding	£ 30,852	£ 32,414	£ 34,055	£ 35,779	£ 37,591	£ 39,494	£ 41,493	£ 43,594	£ 45,801	£ 48,119	
Fees	£ 4,242	£ 4,242	£ 4,242	£ 4,242	£ 4,242	£ 4,242	£ 4,242	£ 4,242	£ 4,242	£ 4,242	
Registration	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	
Net Benefit: Access Course	£ 17,592	£ 16,029	£ 14,388	£ 12,664	£ 10,853	£ 8,950	£ 6,951	£ 4,850	£ 2,643	£ 324	
Discounting ratio	1	0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51316	0.46651	0.42410	
Discounted Net Benefit: Access Course	£ 17,592	£ 14,572	£ 11,891	£ 9,515	£ 7,413	£ 5,557	£ 3,924	£ 2,489	£ 1,233	£ 137	
Net Present Value: Access Course	£ 74,322										
Quality Assurance mechanisms Costs:											
AVA membership	£ 2,000	£ 2,050	£ 2,101	£ 2,154	£ 2,208	£ 2,263	£ 2,319	£ 2,377	£ 2,437	£ 2,498	
Recognition	£ 300					£ 308					
Registration/Certification	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	
Number present at panel	3					3					
Panel staffing	£ 1,550					£ 1,669					
Panel meeting room	£ -					£ -					
Panel meeting catering	£ 75					£ 77					
Hours at panel	6					6					
Moderators fee	£ 150	£ 154	£ 158	£ 162	£ 166	£ 170	£ 174	£ 178	£ 183	£ 187	
Course documentation	£ 90					£ 95					
Teaching staff (development)	£ 1,550					£ 1,669					
Administrative staff (development)	£ 50					£ 54					
Management costs (development)	£ 1,550					£ 1,669					
Quality Assurance mechanisms Benefits:											
Net Benefit: Quality Assurance mechanisms	£ 7,315	£ 2,204	£ 2,259	£ 2,315	£ 2,373	£ 2,431	£ 2,493	£ 2,555	£ 2,620	£ 2,685	
Discounting ratio	1	0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51316	0.46651	0.42410	
Discounted Net Benefit: Quality Assurance mechanisms	£ 7,315	£ 2,004	£ 1,867	£ 1,739	£ 1,621	£ 1,499	£ 1,407	£ 1,311	£ 1,222	£ 1,139	
Net Present Value: Quality Assurance mechanisms	£ 24,574										

Net Benefit: Access Course = Net Benefit of Access Course (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Access Course = Net Benefit of Access Course x Discount ratio

Net Present Value: Access course = sum of discounted net benefits

Net Benefit: Quality Assurance mechs. = Net Benefit of Quality Assurance procedures (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Quality Assurance mechanisms = Net Benefit of QA x Discount ratio

Net Present Value: Quality Assurance mechanisms = sum of discounted net benefits

Case B: Cost and Benefit calculations (Students)										
Factor	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Access Course Costs:										
Course Fees	£ 606									
Course registration fee	£ -									
Travel	£ 122									
Equipment	£ 50									
Crèche	£ -									
Access Course Benefits:										
Travel allowances	£ -									
Other allowances	£ 1,229									
Percentage of graduate earnings	£ -									
Net Benefit: Access Course	£ 451									
Discounting ratio	1	0.909091	0.826446	0.751315	0.68301346	0.62092132	0.56447393	0.51315812	0.46650738	0.42409762
Discounted Net Benefit: Access Course	£ 451	£ -	£ -	£ -	£ 6,853	£ 6,387	£ 5,951	£ 5,545	£ 5,167	£ 4,815
Net Present Value: Access Course	£ 68,499									
Quality Assurance mechanisms Costs:										
Quality Assurance mechanisms Benefits:										
Percentage of graduate earnings attributable to the Access Course										
Net Benefit: Quality Assurance mechanisms										
Discounting ratio	1	0.909091	0.826446	0.751315	0.68301346	0.62092132	0.56447393	0.51315812	0.46650738	0.42409762
Discounted Net Benefit: Quality Assurance mechanisms	£ -	£ -	£ -	£ -	£ 4,112	£ 3,832	£ 3,571	£ 3,327	£ 3,100	£ 2,889
Net Present Value: Quality Assurance mechanisms	£ 40,829									

Net Benefit: Access Course = Net Benefit of Access Course (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Access Course = Net Benefit of Access Course x Discount ratio

Net Present Value: Access course = sum of discounted net benefits

Net Benefit: Quality Assurance mechs. = Net Benefit of Quality Assurance procedures (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Quality Assurance mechanisms = Net Benefit of QA x Discount ratio

Net Present Value: Quality Assurance mechanisms = sum of discounted net benefits

Case B: Cost and Benefit calculations (Higher Education Institution)										
Factor	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Quality Assurance mechanisms Costs:										
AVA membership	£ 200	£ 205	£ 210	£ 215	£ 221	£ 226	£ 232	£ 238	£ 244	£ 250
Number of representatives at panel	1				1					1
Average earnings per hour for representatives	£ 60	£ 62	£ 63	£ 65	£ 66	£ 68	£ 70	£ 71	£ 73	£ 75
Time at panel	6					5				
Time spent in preparation and at panel	£ 450					£ 407				
Time moderating	£ 720	£ 756	£ 795	£ 835	£ 877	£ 922	£ 968	£ 1,017	£ 1,069	£ 1,123
National framework	£ 24.40	£ 24.40	£ 24.40	£ 24.40	£ 24.40	£ 24.40	£ 24.40	£ 24.40	£ 24.40	£ 24.40
Quality Assurance mechanisms Benefits:										
Funding for students accepted	£ 11,000	£ 11,275	£ 11,557	£ 11,846	£ 12,142	£ 12,445	£ 12,757	£ 13,076	£ 13,402	£ 13,737
Moderation expenses	£ 150	£ 154	£ 158	£ 162	£ 166	£ 170	£ 174	£ 178	£ 183	£ 187
Net Benefit: Quality Assurance mechanisms	£ 9,756	£ 10,443	£ 10,685	£ 10,933	£ 11,185	£ 11,036	£ 11,706	£ 11,975	£ 12,248	£ 12,528
Discounting ratio	1	0.90909091	0.82644628	0.7513148	0.68301346	0.62092132	0.56447393	0.51315812	0.46650738	0.42409762
Discounted Net Benefit: Quality Assurance mechanisms	£ 9,756	£ 9,494	£ 8,831	£ 8,214	£ 7,640	£ 6,852	£ 6,608	£ 6,145	£ 5,714	£ 5,313
Net Present Value: Quality Assurance mechanisms	£ 74,565									

Net Benefit: Quality Assurance mechs. = Net Benefit of Quality Assurance procedures (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Quality Assurance mechanisms = Net Benefit of QA x Discount ratio

Net Present Value: Quality Assurance mechanisms = sum of discounted net benefits

Case B: Increment chart									
	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	
Number of representatives (providing institution) at panel %									
Moderators % (1)	1	1	1	1	1	1	1	1	1
Moderators fee %	153.75	157.59	161.53	165.57	169.71	173.95	178.30	182.76	
Hours spent on moderation %	12.30	12.61	12.92	13.25	13.58	13.92	14.26	14.62	
Course documents %					15.38				
Course documents price %					6.15				
Teaching staff %					3.08				
Hours spent on development %					6.15				
Average earnings per hour %					88.24				
Administrative staff %					1.03				
Administrative cost per hour %					5.13				
Hours spent on development (admin) %					10.25				
Management staff %					3.08				
Management cost per hour %					88.24				
Hours spent on development (management) %					6.15				
Programme teaching hours %	612.00	612.00	612.00	612.00	612.00	612.00	612.00	612.00	612.00
Staff costs %	9,079,596.58	9,306,586.49	9,539,251.16	9,777,732.44	10,022,175.75	10,272,730.14	10,529,548.39	10,792,787.10	
Teaching hours %	105,469.43	108,106.17	110,808.82	113,579.04	116,418.52	119,328.98	122,312.20	125,370.01	
Student registration fee %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enrolments %	15.38	15.76	16.16	16.56	16.98	17.40	17.84	18.28	
Funding unit price %	23.90	24.50	25.11	25.74	26.38	27.04	27.72	28.41	
Funding units %	1,356.08	1,389.98	1,424.73	1,460.35	1,496.86	1,534.28	1,572.64	1,611.95	
Course fee %	606.00	606.00	606.00	606.00	606.00	606.00	606.00	606.00	
Fee payers %	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	
Hours at panel %					6.15				
HE representatives earnings per hour %	61.50	63.04	64.61	66.23	67.88	69.58	71.32	73.10	
HE representatives at panel %	1	1	1	1	1	1	1	1	1
Students at HE institution %	5	5	5	5	5	5	5	5	5
HE funding per student %	2,255.00	2,311.38	2,369.16	2,428.39	2,489.10	2,551.33	2,615.11	2,680.49	
Graduate earnings %	0.00	0.00	0.00	0.00	17,143.00	17,571.58	18,010.86	18,461.14	
Registration/Certification %	33.83	34.68	35.54	36.43	37.34	38.28	39.23	40.21	
Access students with certificate %	21,001.00	21,526.03	22,064.18	22,615.78	23,181.17	23,760.70	24,354.72	24,963.59	
National Framework operating costs %	102,500.00	105,062.50	107,689.06	110,381.29	113,140.82	115,969.34	118,868.58	121,840.29	

Case C: Providing institution factors			
Validation/Recognition:			
AVA membership	£ 200	Panel meeting catering	£ -
Recognition	£ 500	Hours at panel	4
Registration/Certification*	£ 75	No. of moderators	1
No. present at panel	6	Moderators fee	£ -
Panel meeting room	£ -	Avg staffing costs/hr**	£ 95.36
Course development:			
No. of course documents	15	Administrative staff	1
Cost per document	£ 5.34	Admin. staff cost per hour	£ 7
Teaching staff	6	Hours spent on development	10
Hours spent at panel	10	Management staff	1
Student registration fee	£ -	Management staff cost per hour	£ 95.36
		Hours spent on development	4
Funding:			
Student enrolments	15	Funding unit price	£ 23.81
Student completions	5	Total funding units gained	1311
Institutional staffing costs (p.a.)	£19,644,000	No. of fee paying students	2
Institutional teaching hours (p.a.)	206000	Course fee amount	£ 595.00
Programme teaching hours	738		
Discounted Net Benefit: Quality Assurance mechanisms			-£ 25,786
Discounted Net Benefit: Access Course			-£ 226,427

* Per student **Per panel member

Case C: Student factors			
Course fees	£ 595	Travel allowance	£ -
Travel (year)	£ 122.40	Other allowances	£ -
Equipment (year)	£ 50	Graduate earnings	£ 16,725
Crèche (year)	£ 204	Course registration fee	£ -
Discounted Net Benefit: Quality Assurance mechanisms			£ 40,829
Discounted Net Benefit: Access Course			£ 67,077

Case C: Higher Education factors			
AVA membership	£ 200	Time spent moderating	12
No. of representatives at panel	1	Students accepted to HE institution	2
Average earnings for representatives	£ 60	Funding per student	£ 2,200
Time at panel	4	Moderation fee income	£ 150
Time spent in preparation for panel	1	National Framework operating costs	£ 100,000
No. of Access students with certificate	20489		
Discounted Net Benefit: Quality Assurance mechanisms			£ 25,872

Case C: Cost and Benefit calculations (Providing Institution)										
Factor	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Access Course Costs:										
Course Provision	£ 70,375	£ 70,375	£ 70,375	£ 70,375	£ 70,375	£ 70,375	£ 70,375	£ 70,375	£ 70,375	£ 70,375
Access Course Benefits:										
Funding	£ 31,215	£ 32,315	£ 33,454	£ 34,634	£ 35,854	£ 37,118	£ 38,427	£ 39,781	£ 41,184	£ 42,635
Fees	£ 1,190	£ 1,190	£ 1,190	£ 1,190	£ 1,190	£ 1,190	£ 1,190	£ 1,190	£ 1,190	£ 1,190
Registration	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Net Benefit: Access Course	-£ 37,970	-£ 36,870	-£ 35,731	-£ 34,551	-£ 33,331	-£ 32,067	-£ 30,758	-£ 29,404	-£ 28,001	-£ 26,550
Discounting ratio	1	0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51316	0.46651	0.42410
Discounted Net Benefit: Access Course	-£ 37,970	-£ 33,518	-£ 29,530	-£ 25,959	-£ 22,766	-£ 19,911	-£ 17,362	-£ 15,089	-£ 13,063	-£ 11,260
Net Present Value: Access Course	-£ 226,427									
Quality Assurance mechanisms Costs:										
AVA membership	£ 200	£ 205	£ 210	£ 215	£ 221	£ 226	£ 232	£ 238	£ 244	£ 250
Recognition	£ 500					£ 513				
Registration/Certification	£ 1,125	£ 1,182	£ 1,242	£ 1,305	£ 1,371	£ 1,440	£ 1,513	£ 1,590	£ 1,670	£ 1,755
Number present at panel	6					6				
Panel staffing	£ 2,288					£ 2,465				
Panel meeting room	£ -					£ -				
Panel meeting catering	£ -					£ -				
Hours at panel	4					4				
Moderators fee	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Course documentation	£ 80					£ 84				
Teaching staff (development)	£ 5,722					£ 6,161				
Administrative staff (development)	£ 70					£ 75				
Management costs (development)	£ 381					£ 411				
Quality Assurance mechanisms Benefits:										
Net Benefit: Quality Assurance mechanisms	-£ 10,366	-£ 1,387	-£ 1,452	-£ 1,520	-£ 1,592	-£ 1,664	-£ 1,745	-£ 1,828	-£ 1,914	-£ 2,005
Discounting ratio	1	0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51316	0.46651	0.42410
Discounted Net Benefit: Quality Assurance mechanisms	-£ 10,366	-£ 1,261	-£ 1,200	-£ 1,142	-£ 1,087	-£ 1,032	-£ 985	-£ 938	-£ 893	-£ 850
Net Present Value: Quality Assurance mechanisms	-£ 25,785									

Net Benefit: Access Course = Net Benefit of Access Course (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Access Course = Net Benefit of Access Course x Discount ratio

Net Present Value: Access course = sum of discounted net benefits

Net Benefit: Quality Assurance mechs. = Net Benefit of Quality Assurance procedures (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Quality Assurance mechanisms = Net Benefit of QA x Discount ratio

Net Present Value: Quality Assurance mechanisms = sum of discounted net benefits

Case C: Cost and Benefit calculations (Students)										
Factor	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Access Course Costs:										
Course Fees	£ 595									
Course registration fee	£ -									
Travel	£ 122									
Equipment	£ 50									
Crèche	£ 204									
Access Course Benefits:										
Travel allowances	£ -									
Other allowances	£ -									
Percentage of graduate earnings	£ -				£ 10,035	£ 10,286	£ 10,543	£ 10,807	£ 11,077	£ 11,354
Net Benefit: Access Course	-£ 971				£ 10,035	£ 10,286	£ 10,543	£ 10,807	£ 11,077	£ 11,354
Discounting ratio	1	0.909091	0.826446	0.751315	0.68301346	0.62092132	0.56447393	0.51315812	0.46650738	0.42409762
Discounted Net Benefit: Access Course	-£ 971	£ -	£ -	£ -	£ 6,853	£ 6,387	£ 5,951	£ 5,545	£ 5,167	£ 4,815
Net Present Value: Access Course	£ 67,077									
Quality Assurance mechanisms Costs:										
Quality Assurance mechanisms Benefits:										
Percentage of graduate earnings attributable to the Access Course					£ 6,021	£ 6,172	£ 6,326	£ 6,484	£ 6,646	£ 6,812
Net Benefit: Quality Assurance mechanisms					£ 6,021	£ 6,172	£ 6,326	£ 6,484	£ 6,646	£ 6,812
Discounting ratio	1	0.909091	0.826446	0.751315	0.68301346	0.62092132	0.56447393	0.51315812	0.46650738	0.42409762
Discounted Net Benefit: Quality Assurance mechanisms	£ -	£ -	£ -	£ -	£ 4,112	£ 3,832	£ 3,571	£ 3,327	£ 3,100	£ 2,889
Net Present Value: Quality Assurance mechanisms	£ 40,829									

Net Benefit: Access Course = Net Benefit of Access Course (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Access Course = Net Benefit of Access Course x Discount ratio

Net Present Value: Access course = sum of discounted net benefits

Net Benefit: Quality Assurance mechs. = Net Benefit of Quality Assurance procedures (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Quality Assurance mechanisms = Net Benefit of QA x Discount ratio

Net Present Value: Quality Assurance mechanisms = sum of discounted net benefits

Case C: Cost and Benefit calculations (Higher Education Institution)											
Factor	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Quality Assurance mechanisms Costs:											
AVA membership	£ 200	£ 205	£ 210	£ 215	£ 221	£ 226	£ 232	£ 238	£ 244	£ 250	
Number of representatives at panel	1				1					1	
Average earnings per hour for representatives	£ 60	£ 62	£ 63	£ 65	£ 66	£ 68	£ 70	£ 71	£ 73	£ 75	
Time at panel	4					4				4	
Time spent in preparation and at panel	£ 300					£ 272					
Time moderating	£ 720	£ 756	£ 795	£ 835	£ 877	£ 922	£ 968	£ 1,017	£ 1,069	£ 1,123	
National framework	£ 9.76	£ 9.76	£ 9.76	£ 9.76	£ 9.76	£ 9.76	£ 9.76	£ 9.76	£ 9.76	£ 9.76	
Quality Assurance mechanisms Benefits:											
Funding for students accepted	£ 4,400	£ 4,510	£ 4,623	£ 4,738	£ 4,857	£ 4,978	£ 5,103	£ 5,230	£ 5,361	£ 5,495	
Moderation expenses	£ 150	£ 154	£ 158	£ 162	£ 166	£ 170	£ 174	£ 178	£ 183	£ 187	
Net Benefit: Quality Assurance mechanisms	£ 3,320	£ 3,693	£ 3,765	£ 3,840	£ 3,915	£ 3,718	£ 4,067	£ 4,144	£ 4,221	£ 4,300	
Discounting ratio	1	0.90909091	0.82644628	0.7513148	0.68301346	0.62092132	0.56447393	0.51315812	0.46650738	0.42409762	
Discounted Net Benefit: Quality Assurance mechanisms	£ 3,320	£ 3,357	£ 3,112	£ 2,885	£ 2,674	£ 2,309	£ 2,296	£ 2,127	£ 1,969	£ 1,824	
Net Present Value: Quality Assurance mechanisms	£ 25,872										

Net Benefit: Quality Assurance mechs. = Net Benefit of Quality Assurance procedures (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Quality Assurance mechanisms = Net Benefit of QA x Discount ratio

Net Present Value: Quality Assurance mechanisms = sum of discounted net benefits

Case C: Increment chart								
	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Number of representatives (providing institution) at panel %				6.15				
Moderators % (1)	1	1	1	1	1	1	1	1
Moderators fee %	153.75	157.59	161.53	165.57	169.71	173.95	178.30	182.76
Hours spent on moderation %	12.30	12.61	12.92	13.25	13.58	13.92	14.26	14.62
Course documents %					15.38			
Course documents price %					5.47			
Teaching staff %					6.15			
Hours spent on development %					10.25			
Average earnings per hour %					97.74			
Administrative staff %					1.03			
Administrative cost per hour %					7.18			
Hours spent on development (admin) %					10.25			
Management staff %					1.03			
Management cost per hour %					97.74			
Hours spent on development (management) %					4.10			
Programme teaching hours %	738.00	738.00	738.00	738.00	738.00	738.00	738.00	738.00
Staff costs %	20,135,100.00	20,638,478.00	21,154,439.95	21,683,300.95	22,225,383.47	22,781,018.06	23,350,543.51	23,934,307.10
Teaching hours %	211,150.00	216,428.75	221,839.47	227,385.46	233,070.09	238,896.84	244,869.27	250,991.00
Student registration fee %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enrolments %	15.38	15.76	16.16	16.56	16.98	17.40	17.84	18.28
Funding unit price %	24.05	24.29	24.53	24.78	25.02	25.27	25.53	25.78
Funding units %	1,343.78	1,377.37	1,411.81	1,447.10	1,483.28	1,520.36	1,558.37	1,597.33
Course fee %	595.00	595.00	595.00	595.00	595.00	595.00	595.00	595.00
Fee payers %	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Hours at panel %					4.10			
HE representatives earnings per hour %	61.50	63.04	64.61	66.23	67.88	69.58	71.32	73.10
HE representatives at panel %	1	1	1	1	1	1	1	1
Students at HE institution %	2	2	2	2	2	2	2	2
HE funding per student %	2,255.00	2,311.38	2,369.16	2,428.39	2,489.10	2,551.33	2,615.11	2,680.49
Graduate earnings %	0.00	0.00	0.00	0.00	17,143.00	17,571.58	18,010.86	18,461.14
Registration/Certification %	76.88	78.80	80.77	82.79	84.86	86.98	89.16	91.39
Access students with certificate %	21,001.00	21,526.03	22,064.18	22,615.78	23,181.17	23,760.70	24,354.72	24,963.59
National Framework operating costs %	102,500.00	105,062.50	107,689.06	110,381.29	113,140.82	115,969.34	118,868.58	121,840.29

Case D: Providing institution factors			
Validation/Recognition:			
AVA membership	£ -	Panel meeting catering	£ 30
Recognition	£ -	Hours at panel	3
Registration/Certification*	£ -	No. of moderators	2
No. present at panel	12	Moderators fee	£ -
Panel meeting room	£ -	Avg staffing costs/hr**	£ 62.50
Course development:			
No. of course documents	15	Administrative staff	1
Cost per document	£ 2.00	Admin. staff cost per hour	£ 6
Teaching staff	12	Hours spent on development	10
Hours spent at panel	3	Management staff	1
Student registration fee	£ 38.00	Management staff cost per hour	£ 62.50
		Hours spent on development	3
Funding:			
Student enrolments	17	Funding unit price	£ 20.50
Student completions	13	Total funding units gained	1500
Institutional staffing costs (p.a.)	£15,000,000	No. of fee paying students	0
Institutional teaching hours (p.a.)	240000	Course fee amount	£ -
Programme teaching hours	578		
Discounted Net Benefit: Quality Assurance mechanisms			-£ 8,021
Discounted Net Benefit: Access Course			£ 13,399

* Per student **Per panel member

Case D: Student factors			
Course fees	£ -	Travel allowance	£ -
Travel (year)	£ 122.40	Other allowances	£ 1,020
Equipment (year)	£ 50	Graduate earnings	£ 16,725
Crèche (year)	£ 204	Course registration fee	£ -
Discounted Net Benefit: Quality Assurance mechanisms			£ 40,829
Discounted Net Benefit: Access Course			£ 65,572

Case D: Higher Education factors			
AVA membership	£ -	Time spent moderating	12
No. of representatives at panel	1	Students accepted to HE institution	13
Average earnings for representatives	£ 60	Funding per student	£ 2,200
Time at panel	3	Moderation fee income	£ -
Time spent in preparation for panel	1.5	National Framework operating costs	£ 100,000
No. of Access students with certificate	20489		
Discounted Net Benefit: Quality Assurance mechanisms			£ 205,616

Case D: Cost and Benefit calculations (Providing Institution)										
Factor	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Access Course Costs:										
Course Provision	£ 36,125	£ 36,125	£ 36,125	£ 36,125	£ 36,125	£ 36,125	£ 36,125	£ 36,125	£ 36,125	£ 36,125
Access Course Benefits:										
Funding	£ 30,750	£ 32,307	£ 33,942	£ 35,661	£ 37,466	£ 39,363	£ 41,355	£ 43,449	£ 45,649	£ 47,960
Fees	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Registration	£ 646	£ 679	£ 713	£ 749	£ 787	£ 827	£ 869	£ 913	£ 959	£ 1,008
Net Benefit: Access Course	£ 4,730	£ 3,139	£ 1,470	£ 285	£ 2,128	£ 4,065	£ 6,099	£ 8,237	£ 10,483	£ 12,842
Discounting ratio	1	0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51316	0.46651	0.42410
Discounted Net Benefit: Access Course	£ 4,730	£ 2,854	£ 1,215	£ 214	£ 1,453	£ 2,524	£ 3,443	£ 4,227	£ 4,890	£ 5,446
Net Present Value: Access Course	£ 13,399									
Quality Assurance mechanisms Costs:										
AVA membership	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Recognition	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Registration/Certification	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Number present at panel	12					12				
Panel staffing	£ 2,250					£ 2,423				
Panel meeting room	£ -					£ -				
Panel meeting catering	£ 30					£ 31				
Hours at panel	3					4				
Moderators fee	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Course documentation	£ 30					£ 32				
Teaching staff (development)	£ 2,250					£ 2,423				
Administrative staff (development)	£ 60					£ 65				
Management costs (development)	£ 188					£ 202				
Quality Assurance mechanisms Benefits:										
Net Benefit: Quality Assurance mechanisms	£ 4,808	£ -	£ -	£ -	£ -	£ 5,175	£ -	£ -	£ -	£ -
Discounting ratio	1	0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51316	0.46651	0.42410
Discounted Net Benefit: Quality Assurance mechanisms	£ 4,808	£ -	£ -	£ -	£ -	£ 3,213	£ -	£ -	£ -	£ -
Net Present Value: Quality Assurance mechanisms	£ 8,021									

Net Benefit: Access Course = Net Benefit of Access Course (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Access Course = Net Benefit of Access Course x Discount ratio

Net Present Value: Access course = sum of discounted net benefits

Net Benefit: Quality Assurance mechs. = Net Benefit of Quality Assurance procedures (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Quality Assurance mechanisms = Net Benefit of QA x Discount ratio

Net Present Value: Quality Assurance mechanisms = sum of discounted net benefits

Case D: Cost and Benefit calculations (Students)										
Factor	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Access Course Costs:										
Course Fees	£ -									
Course registration fee	£ -									
Travel	£ 122									
Equipment	£ 50									
Crèche	£ 204									
Earnings foregone	£ 2,100									
Access Course Benefits:										
Travel allowances	£ -									
Other allowances	£ -									
Percentage of graduate earnings	£ -				£ 10,035	£ 10,286	£ 10,543	£ 10,807	£ 11,077	£ 11,354
Net Benefit: Access Course	-£ 2,476				£ 10,035	£ 10,286	£ 10,543	£ 10,807	£ 11,077	£ 11,354
Discounting ratio	1	0.909091	0.826446	0.751315	0.68301346	0.62092132	0.56447393	0.51315812	0.46650738	0.42409762
Discounted Net Benefit: Access Course	-£ 2,476	£ -	£ -	£ -	£ 6,853	£ 6,387	£ 5,951	£ 5,545	£ 5,167	£ 4,815
Net Present Value: Access Course	£ 65,572									
Quality Assurance mechanisms Costs:										
Quality Assurance mechanisms Benefits:										
Percentage of graduate earnings attributable to the Access Course					£ 6,021	£ 6,172	£ 6,326	£ 6,484	£ 6,646	£ 6,812
Net Benefit: Quality Assurance mechanisms					£ 6,021	£ 6,172	£ 6,326	£ 6,484	£ 6,646	£ 6,812
Discounting ratio	1	0.909091	0.826446	0.751315	0.68301346	0.62092132	0.56447393	0.51315812	0.46650738	0.42409762
Discounted Net Benefit: Quality Assurance mechanisms	£ -	£ -	£ -	£ -	£ 4,112	£ 3,832	£ 3,571	£ 3,327	£ 3,100	£ 2,889
Net Present Value: Quality Assurance mechanisms	£ 40,829									

Net Benefit: Access Course = Net Benefit of Access Course (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Access Course = Net Benefit of Access Course x Discount ratio

Net Present Value: Access course = sum of discounted net benefits

Net Benefit: Quality Assurance mechs. = Net Benefit of Quality Assurance procedures (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Quality Assurance mechanisms = Net Benefit of QA x Discount ratio

Net Present Value: Quality Assurance mechanisms = sum of discounted net benefits

Case D: Cost and Benefit calculations (Higher Education Institution)										
Factor	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Quality Assurance mechanisms Costs:										
AVA membership	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Number of representatives at panel	1									
Average earnings per hour for representatives	£ 60	£ 62	£ 63	£ 65	£ 66	£ 68	£ 70	£ 71	£ 73	£ 75
Time at panel	3					3				4
Time spent in preparation and at panel	£ 270					£ 204				£ 236
Time moderating	£ 720	£ 756	£ 795	£ 835	£ 877	£ 922	£ 968	£ 1,017	£ 1,069	£ 1,123
National framework	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45	£ 63.45
Quality Assurance mechanisms Benefits:										
Funding for students accepted	£ 28,600	£ 29,315	£ 30,048	£ 30,799	£ 31,569	£ 32,358	£ 33,167	£ 33,996	£ 34,846	£ 35,717
Moderation expenses	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Net Benefit: Quality Assurance mechanisms	£ 27,547	£ 28,496	£ 29,189	£ 29,901	£ 30,629	£ 31,169	£ 32,136	£ 32,916	£ 33,714	£ 34,295
Discounting ratio	1	0.90909091	0.82644628	0.7513148	0.68301346	0.62092132	0.56447393	0.51315812	0.46650738	0.42409762
Discounted Net Benefit: Quality Assurance mechanisms	£ 27,547	£ 25,905	£ 24,123	£ 22,465	£ 20,920	£ 19,353	£ 18,140	£ 16,891	£ 15,728	£ 14,544
Net Present Value: Quality Assurance mechanisms	£ 205,616									

Net Benefit: Quality Assurance mechs. = Net Benefit of Quality Assurance procedures (benefit - cost)

Discounting ratio = 10%

Discounted Net Benefit: Quality Assurance mechanisms = Net Benefit of QA x Discount ratio

Net Present Value: Quality Assurance mechanisms = sum of discounted net benefits

Case D: Increment chart									
	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	
Number of representatives (providing institution) at panel %				12.30					
Moderators % (1)	2	2	2	2	2	2	2	2	2
Moderators fee %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hours spent on moderation %	12.30	12.61	12.92	13.25	13.58	13.92	14.26	14.62	
Course documents %					15.38				
Course documents price %					2.05				
Teaching staff %					12.30				
Hours spent on development %					3.08				
Average earnings per hour %					64.06				
Administrative staff %					1.03				
Administrative cost per hour %					6.15				
Hours spent on development (admin) %					10.25				
Management staff %					1.03				
Management cost per hour %					64.06				
Hours spent on development (management) %					3.08				
Programme teaching hours %	578.00	578.00	578.00	578.00	578.00	578.00	578.00	578.00	578.00
Staff costs %	15,375,000.00	15,759,375.00	16,153,359.38	16,557,193.36	16,971,123.19	17,395,401.27	17,830,286.31	18,276,043.46	
Teaching hours %	246,000.00	252,150.00	258,453.75	264,915.09	271,537.97	278,326.42	285,284.58	292,416.70	
Student registration fee %	38.95	39.92	40.92	41.94	42.99	44.07	45.17	46.30	
Enrolments %	17.43	17.87	18.31	18.77	19.24	19.72	20.21	20.72	
Funding unit price %	21.01	21.54	22.08	22.63	23.19	23.77	24.37	24.98	
Funding units %	1,537.50	1,575.94	1,615.34	1,655.72	1,697.11	1,739.54	1,783.03	1,827.60	
Course fee %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fee payers %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Hours at panel %					4.10				
HE representatives earnings per hour %	61.50	63.04	64.61	66.23	67.88	69.58	71.32	73.10	
HE representatives at panel %	1	1	1	1	1	1	1	1	
Students at HE institution %	13	13	13	13	13	13	13	13	
HE funding per student %	2,255.00	2,311.38	2,369.16	2,428.39	2,489.10	2,551.33	2,615.11	2,680.49	
Graduate earnings %	0.00	0.00	0.00	0.00	17,143.00	17,571.58	18,010.86	18,461.14	
Registration/Certification %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Access students with certificate %	21,001.00	21,526.03	22,064.18	22,615.78	23,181.17	23,760.70	24,354.72	24,963.59	
National Framework operating costs %	102,500.00	105,062.50	107,689.06	110,381.29	113,140.82	115,969.34	118,868.58	121,840.29	

Case D: Increment chart continued										
Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
12.61										
2										
0.00										
14.99										
15.76										
2.10										
12.61										
3.15										
65.66										
1.05										
6.30										
10.51										
1.05										
65.66										
3.15										
578.00										
18,732,944.55										
299,727.11										
47.46										
21.24										
25.60										
1,873.29										
0.00										
0.00										
74.93										
1										
13										
2,747.50										
18,922.66	19,395.73	19,880.62	20,377.64	20,887.08	21,409.26	21,944.49	22,493.10	23,055.43	23,631.81	24,222.61
0.00										
25,587.68										
124,886.30										

Appendix 6: Analysis of panel evaluation forms

Not attended panel before	Response	No.	%
Were you clear about the panel processes before the panel?	Yes	34	92
	No	3	8
	Non-response	0	0
How satisfied were you with the panel as a recognition process?	Very satisfied	28	76
	Fairly satisfied	9	24
	Non-response	0	0
Did the information you received before the panel contain sufficient detail about the courses?	Agree	34	92
	Non-response	3	8
Was the information you received easy to understand?	Agree	26	70
	Unsure	2	5.5
	Disagree	2	5.5
	Non-response	7	19
Did the information you received address the issues on the submission form?	Agree	26	70
	Unsure	3	8
	Non-response	8	22
Did the recognition panel examine all relevant aspects of the courses under consideration?	Yes	24	65
	Most	11	30
	Non-response	2	5
Were all panel members who wished to contribute given the opportunity to do so?	Yes	37	100
Do recognition panels provide an opportunity for curriculum development?	Yes	37	100
Was the range of experience of panel members suitable for the courses being considered?	Yes	32	86
	No	4	11
	Unsure	1	3
Did the panel have a supportive atmosphere?	Yes	36	97
	No	1	3
Were equal opportunities issues discussed fully?	Yes	27	73
	No	4	11
	Unsure	4	11
	Non-response	2	5

Was the panel a useful staff development exercise?	Yes	36	97
	Unsure	1	3
Did the panel improve the quality of the courses under consideration?	Yes	35	94
	No	1	3
	Unsure	1	3

The opportunity to comment at the end of the evaluation form highlighted that the panel process was an enlightening and worthwhile experience for many panel members:

"The panel is not an endorsing 'paper' tiger' and decisions made are positive and action can be immediately taken."

"More a reasoned exchange of ideas, less a threatening inquisition than might have been expected."

"An excellent opportunity to discuss a range of issues re: Access, to share ideas, concerns and productive ways forward."

"Very positive and supportive feedback in a friendly atmosphere. Well chaired."

"A very high level of help and support was provided by all the W&NYAN staff involved. We were impressed."

"Enthusiastic and positive."

"The panel did not really improve the quality of the course under consideration as it was good already."

Attended panel before	Response	No.	%
Were you clear about the panel processes before the panel?	Yes	31	100
How satisfied were you with the panel as a recognition process?	Very satisfied	19	61
	Fairly satisfied	11	36
	Fairly dissatisfied	1	3
Did the information you received before the panel contain sufficient detail about the courses?	Agree	26	84
	Disagree	3	10
	Non-response	2	6
Was the information you received easy to understand?	Agree	23	74
	Unsure	1	3
	Disagree	4	13
	Non-response	3	10

Did the information you received address the issues on the submission form?	Agree	20	65
	Disagree	5	16
	Unsure	1	3
	Non-response	5	16
Did the recognition panel examine all relevant aspects of the courses under consideration?	Yes	17	55
	Most	13	42
	Non-response	1	3
Were all panel members who wished to contribute given the opportunity to do so?	Yes	28	91
	Unsure	1	3
	Non-response	2	6
Do recognition panels provide an opportunity for curriculum development?	Yes	27	88
	Unsure	2	6
	Non-response	2	6
Was the range of experience of panel members suitable for the courses being considered?	Yes	23	74
	No	3	10
	Unsure	2	6
Did the panel have a supportive atmosphere?	Yes	28	91
	No	1	3
	Unsure	1	3
	Non-response	1	3
Were equal opportunities issues discussed fully?	Yes	20	65
	No	5	16
	Unsure	2	6
	Non-response	4	13
Was the panel a useful staff development exercise?	Yes	26	84
	Unsure	3	10
	Non-response	2	6
Did the panel improve the quality of the courses under consideration?	Yes	26	84
	No	1	4
	Unsure	2	6
	Non-response	2	6

"The Chair managed to achieve a supportive but rigorous approach to what were potentially very difficult issues."

"Very limited time to consider such a wide programme."

"Constructive atmosphere was helped by specialist knowledge of higher education and Access on the part of all panel members. There were therefore fewer irrelevant and ill-informed comments."

"I would have preferred the atmosphere to have been more supportive of people teaching on / running the courses."

It was unfortunate that the tutor for Access to Nursing Skills was not available. I think this probably negatively affected the decision."

Assuring quality in Access Courses – the authorized version

David Wilkinson

The author

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Abstract

Outlines the development of Access Courses and explains the national quality assurance framework developed to co-ordinate standards within such provision. Generalizes the quality assurance processes of authorized validating agencies (AVAs) in order to facilitate a future exploration of some typical costs and benefits and the appreciation of the problematic nature of such an exercise.

Introduction

Access courses provide an alternative route into higher education for adults without traditional sixth form qualifications or vocational qualifications, allowing them to prepare for and gain entry to degrees and other higher education programmes... (Higher Education Quality Council, 1994, p. 96).

This is the first of two articles examining the development and operation of authorized validating agencies (AVAs). The quality assurance processes of these organizations are outlined and generalized to enable cost-benefit implications to be discussed in the next issue of this journal.

History

What are now termed Access Courses (with upper case initial letters) had their origins in programmes designed for those with few acknowledged qualifications. The structure and delivery of these programmes was less formal than traditional courses of study, allowing learners to study at their own pace and accommodate other commitments such as family responsibilities, work, etc. The Russell Committee, reporting in 1972, commented that this type of provision was "... not intended to cater for those who seek formal qualifications" and was outside "the main areas of technical, art and higher education" (Department of Education and Science, 1973) but recommended, *inter alia*, that adult education of this type should provide adults with the opportunity to study and gain a qualification.

Since the 1970s, questions of access and participation for adults moved from the periphery to near the centre of national policy in education and training: "... initiatives for access had their origin in high places: within and through the state, and formally at the instigation or request of the Department of Education and Science ..." (Parry, 1996). The Department of Education and Science, in 1978, invited eight local education authorities to set up new preparatory courses for

The author is grateful for the comments given on previous drafts of this paper by Dr Pat Davies and Julia Carter of the Department of Continuing Education at City University. Suggestions made by the initial reviewer, Professor Gerald Vinten, also assisted in shaping the work.

adults leading to higher education. The initial aim was to enable more people from ethnic minorities to enter higher education in order to increase their numbers in professions such as teaching and community work with a high profile in the inner cities (Millins, 1984). However, the Department of Education and Science's attempt to cater for the specific problems faced by ethnic minorities in their "cultural acclimatization" (Department of Education and Science, 1978) was "In practice generalised by practitioners, including tutors and course organisers, into a concern to widen access to higher education for various groups who had previously been largely excluded" (Lieven, 1989).

The increase in commitment to access has been attributed to four wider forces:

- (1) a liberal commitment to providing equal opportunities;
- (2) the transferring of resources, and therefore power, to systemically disadvantaged groups;
- (3) a response by institutions to a predicted 33 per cent fall in the typical student intake (19-year-olds) between 1984 and 1996; and
- (4) part of government strategy for retraining the adult population for new forms of work and entry into professions (Lieven, 1989).

The focus on access to education (the participation of adults in post-secondary and higher education) led to a proliferation of programmes which "...emerged in a largely *ad hoc* manner, dependent on local and often fortuitous coincidences..." (Lieven, 1989). However, the emerging definition was based on two key features: a curriculum concerned with preparing the learner for higher education programmes (or other "progression" routes); and a course or programme of study aimed at "disadvantaged" learners. The two key features led to three types of course being provided as:

- (1) alternatives to O and A levels (Percy and Lucas, 1980; Percy *et al.*, 1980);
- (2) what can be termed "community education" courses aimed at enhancing the awareness/understanding among disadvantaged groups; and
- (3) courses aimed at those returning to work (usually women returners).~

The National Framework

As access course provision grew, questions were raised as to the suitability of the developing arrangements for recognition/validation and issues around quality and standards. In the mid-1980s the Lindop Committee drew attention to what it deemed to be "dangers", involved with the large numbers of mature and non-traditional entrants, and higher education institutions organizing or assisting with the organization of access courses linked to their own degree programmes. These links could help to form "relationships and understandings" where rigorous selection at entry might be compromised, and the Committee recommended that access courses should not be designed with a specific higher education course in mind, but should seek recognition from several institutions as an appropriate preparatory course for progression more widely (Department of Education and Science, 1985, p. 70). Although the Lindop Report met with some criticism "... [it] impugns the professional integrity of those involved [in access]" (Parry, 1986), it focused attention on standards within access courses.

'...the 1987 White Paper began the first steps at co-ordinating the growing access course-type provision...'

As a reaction to the diminishing number of 18- and 19-year-olds, access courses were favourably viewed by policy makers as providing some of the student numbers required to meet the anticipated growth in demand for qualified manpower. The 1987 White Paper began the first steps at co-ordinating the growing access course-type provision by inviting validating bodies to develop a framework of recognition which would extend to access provision "in all styles" (Department of Education and Science, 1987).

After some debate the Department of Education and Science invited the Council for National Academic Awards (CNAA) and the Committee of Vice Chancellors and Principals of the Universities (CVCP) to establish the Access Course Recognition Group (ACRG) – a central body responsible for overseeing the co-ordination of standards in access courses across England, Wales and Northern Ireland. To differentiate between

courses that facilitated access to education generally and specific access programmes within the national framework, the title of the latter became known as an Access Course (with upper case letters) rather than an access course. Perhaps because the difference appears, *prima facie*, to be so subtle there is still some confusion over the two types of provision – although Access Courses within the national framework are by far the most widely known programmes that facilitate access to education (and in particular progression to higher education) for those typically underrepresented.

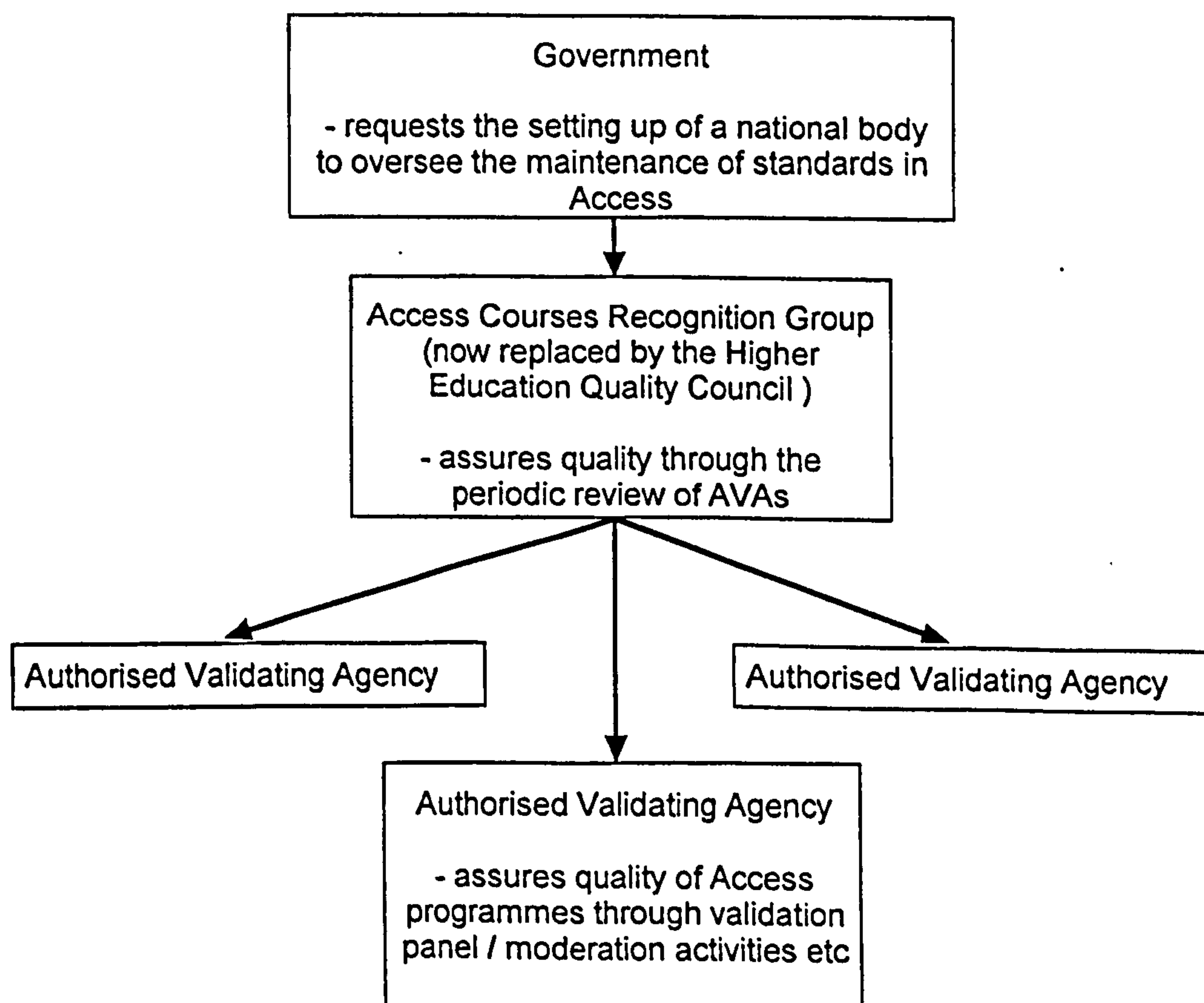
One of the great strengths of Access Courses was their ability to adapt to the needs of the local population who made up the majority of their learners – this diversity still occurs in many programmes. However, as the national framework emerged it became necessary to set out minimum requirements for the programmes within it to allow comparability between courses and facilitate the notion that Access Courses should have a national “currency” beyond local agreements. These

requirements had to complement the key principles of “lightness of touch” on the part of the national body ACRG, and the diversity of approach to validation by the AVAs. Further to this, and to ensure programmes were not diluted or devalued, minimum standards were chosen as a baseline for validation – such as the minimum of 500 study hours for the programme.

‘...there are 37 authorized validating agencies within the national framework, with over half in membership of the National Open College Network, or in transition to that status...’

Once a course is recognized within the national framework it achieves “kitemarked” status. A learner, having successfully completed a kitemarked programme, secures eligibility for entry into higher education.

Figure 1 The national framework for recognizing Access Courses



Under the national framework arrangements, the ACRG (now replaced by the Higher Education Quality Council's Access Courses Recognition Subgroup) licenses organizations to approve Access Courses. Any education organization or consortium can apply for a licence – although certain conventions and guidelines must be observed as to their constitution and procedures. Normally, these “validating agencies” consist of consortia of local further and higher education institutions (see Figure 1).

There are 37 authorized validating agencies (AVAs) within the national framework (UCAS, 1996), with over half in membership of the National Open College Network, or in transition to that status (Parry, 1996, p. 30). However, there is no single model dictating their construction, size or procedure. For example, London Open College Federation – a validating agency recognizing many of the Access programmes in London – had 92 member organizations in 1994 (London Open College Federation, 1994) and that number has continued to grow (over 100 in 1995); and Hertfordshire Access Consortium had eight (Hertfordshire Access Consortium, 1995) with some associate members. Despite this and other differences between AVAs, they are all empowered to use appropriate mechanisms and procedures to assure the quality of the programmes recognized by them.

Quality assurance in Access

There are basically three key aspects to the quality assurance mechanisms involved within the national framework for the recognition of Access Courses:

- (1) the review and evaluation of AVA procedures;
- (2) validation and periodic review of courses; and
- (3) moderation and annual review of courses (Davies and Parry, 1993).

Review and evaluation of AVA procedures

Generally there are two review elements that apply to AVAs: the self-imposed internal review procedures that normally occur every year and can take the form of “review days” to discuss AVA practice and procedures, and the HEQC external periodic review – a wide-ranging review of practice and procedure conducted by HEQC at regular intervals.

Internal evaluation of AVA practices takes many forms, ranging from informal *ad hoc* feedback from local practitioners to the more formal evaluation reports from validation panels. Davies and Parry (1993) identified 12 ways in which evaluation was conducted:

- (1) special review meetings of key committees;
- (2) evaluation reports from course tutors on moderation and validation processes;
- (3) evaluation reports from validation panels;
- (4) annual reports on progress towards aims and objectives;
- (5) reports to the academic boards of members institutions;
- (6) reviews of documents, terms of reference, guidelines, checklists and standing orders;
- (7) reviews of record keeping systems;
- (8) reports on the implementation of criteria for validation and for the appointment of moderators;
- (9) financial reports, budget forecasts and development plans;
- (10) reports of issues arising from staff development events and practitioner forums;
- (11) informal *ad hoc* feedback from local practitioners, providing colleges and receiving institutions;
- (12) feedback from regional and national networks (Davies and Parry, 1993, p. 79).

An example of the above aspects is recognition panel evaluation reports. These often take the form of short questionnaires distributed at the beginning of panel meetings and collected at the end. These “evaluation sheets” are a mixture of short factual questions – such as “Did you receive adequate notice of the panel?” – and queries requesting more qualitative responses such as comments on the chairing of the panel. These open-ended questions allowed participants in the panel to feed back to the AVA their thoughts on the procedures and practices at the panel. They are of particular importance to quality assurance as they focus on particular issues, such as ensuring a representative spread of subject interest, with questions such as: “Do you think the recognition panel examined all relevant aspects of the courses under consideration?”

Validation/periodic review and moderation of courses

It is generally the case that the validation and recognition of Access Courses within the national framework are conducted by panels. Normally the panel process of most AVAs follows the three stages below:

- (1) development;
- (2) panel process;
- (3) post-panel.

At the development stage the course tutor at the providing institution sends a draft submission of the course to the AVA. The document is commented on by a development officer at the AVA and is returned to the tutor with recommendations and advice. The tutor may make amendments, and then sends the final document to the AVA. On receipt of the document, the AVA checks that the document reaches the requirements of submission specifications. If it does the AVA then sets a panel date when the course will be considered for recognition as an Access Course within the national framework.

'...when moderators have been appointed to programmes they make visits to the providing institution, observe the course in operation, view students' work, discuss course delivery and content, and produce an annual report for the AVA providing institution...'

The panel process begins when the AVA informs the providing course institution of the date of the panel and asks for a number of copies of the document to distribute to panel members invited to the panel. At the panel the course team presents a brief overview of the course to the panel, in line with the content of the submission document. Generally, the panel then discusses the overall content of the document before splitting into small subject-specialist groups to analyse various options and modules offered. After considering the programme as a whole the panel can either recognize the course unconditionally (which is quite rare), recognize the course subject to conditions (amendments/changes that must be made before the programme can be fully recognized), defer recognition of the course (where certain elements of the course may

need rewriting), or reject the course (this normally happens when the panel feels a course needs more development – this is also rare). The panel can also make recommendations on the course which, although not binding, should at least be factored when the programme comes up for review/revalidation and may be addressed by the moderator.

After the panel the tutor completes the required work, usually with guidance from the AVA involved in recognition, and sends a revised/amended submission document to the AVA. The AVA then submits the programme to the appropriate quality committee who formally decide whether or not to validate the programme and the providing institution is informed of this decision. Once the course is approved the AVA informs HEQC who then place the course details on a register of recognized courses, which allows the course to attract Schedule 2c funding.

Panels are normally made up of:

- *a chairperson*, normally associated with the AVA, an employee of it or a member of its quality committee(s);
- *a scribe/secretary*, to note the proceedings and provide an accurate record of the panel;
- *the course proposers*, one or more representatives from the providing institutions;
- *adult education/further education and higher education representatives*, who are knowledgeable in the subject areas of the course under consideration and are independent of the course-providing institution (usually, there is a requirement for at least one HE and FE representative to be present);
- *independents*, who are knowledgeable in the relevant subject areas – for example representatives from business, training organizations, etc.

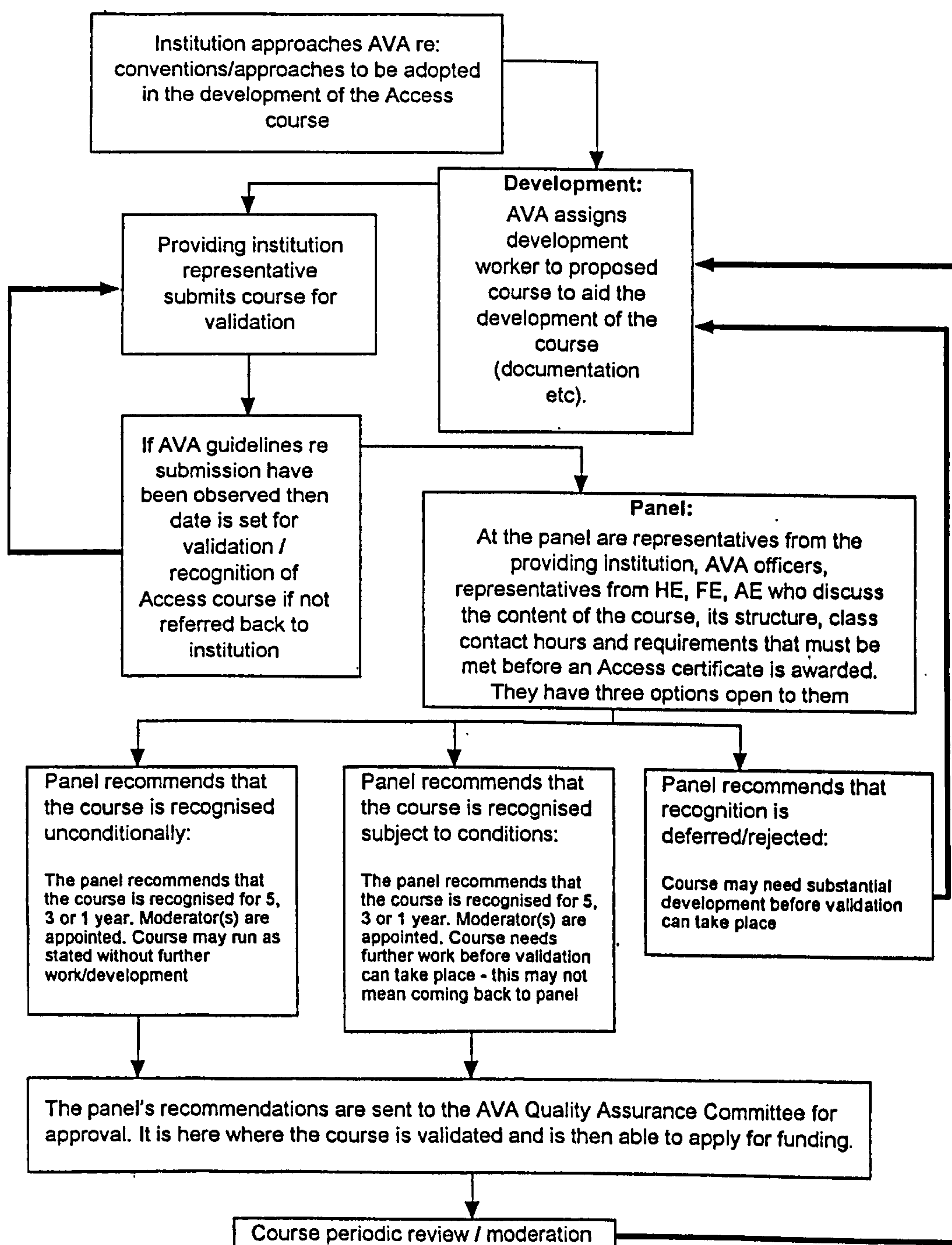
Having recognized the course, the AVA oversees various post-panel quality assurance activities. These include the moderation and review of the programme. In most cases moderators are put forward at the panel meeting stage of the programme's development and they are often present at the panel meeting itself. They assess the quality of the learning experience for the students and the integration and coherence of the curriculum. In the past the majority of moderators were drawn from suitably experienced staff in higher education – although many now come from further education institutions. In small

programmes there is normally one moderator for the entire programme, but in large wide-ranging multi-modular courses it is common to have a moderator to cover one specific area, for example one for art-related subjects, one for business-related subjects and so on. There are exceptions to this general rule, such as Hertfordshire Access Consortium, where two

moderators are appointed for each course – one from higher education and one from further education.

When moderators have been appointed to programmes they make visits to the providing institution, observe the course in operation, view students' work, discuss course delivery and content, and produce an annual report

Figure 2 Quality assurance cycle for Access Courses



for the AVA providing institution. This is so that the moderator can satisfy himself or herself that the course is operating as presented at the panel and as stated in its documentation. The moderators have available to them a copy of the course document and any recommendations and conditions made at panel. If a moderator highlights an area of concern in their report and subsequent action taken by the providing institution on this concern is unsatisfactory, then the AVA can withdraw recognition of that programme. This is very rare, with problems normally being resolved by liaison between the AVA and the providing institution.

Included in the report are details of whether conditions of the original approval were being met and what action was being taken on the recommendations. Visits to providing institutions by moderators can vary but they are generally one per term.

In addition to the moderation of programmes there are also periodic reviews, normally every three or five years (although some courses may have a shorter “probationary” period of one year before their first review). The procedures adopted at such reviews are generally conducted by panels as they were for the original validation/recognition of programmes. Figure 2 shows the quality assurance cycle for Access Courses generally adopted, with local variations by AVAs.

Concluding remarks

Conflicts created by increased participation, alongside cuts in funding, have led to debates focusing on the maintenance of standards and quality in education (Barnett, 1987; Doherty, 1994; Holloway, 1994). The approach taken to quality and standards in access has been the “internal” or “peer group” process developed from the CNAA method with the ownership of quality remaining close to the point of delivery. As a result this approach assures quality rather than controlling it and functions along similar lines to quality circles (its industrial setting counterpart). A peer group process complements the original intentions of the ACRG by accommodating the diversity in approach to validation while still maintaining a “lightness of touch”.

Although the mechanisms used to assure quality in Access are generally effective (Parry, 1995), questions are being raised as to

their efficiency. At the institutional level there are concerns about the resourcing of the activities of peer group quality assurance models (Barnett, 1994). This has led to questions focusing on issues such as: “what are the costs and benefits, and to whom?” In the next issue of this journal the external quality assurance mechanisms initiated or required by AVAs are unpacked to highlight their cost-benefit implications.

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AVAs: adding value to access? A cost-benefit analysis of access quality assurance

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Abstract

Builds on the article in *Quality Assurance in Education*, Vol. 5 No. 1, "Assuring quality in access courses – the authorized version", by discussing the problematic nature of applying cost-benefit analysis to the quality assurance mechanisms of this type of educational provision.

Introduction

In the previous issue of this journal the author outlined the history of access courses and the development of the national quality assurance framework developed to maintain standards within such provision. The diversity of methods of validation, through authorized validating agencies (AVAs), and the national framework of access quality assurance to which they belong, has been the focus of recent debate concentrating, inter alia, on the effectiveness of the arrangements (Parry, 1995). This is in keeping with other educational provision where questions about the costs of quality have been raised (Harvey and Green, 1993; Vroeijenstijn, 1996). This article is timely in adding to that debate in the access environment by introducing some of the costs and benefits of AVA initiated (external) quality assurance processes and highlighting the problematic nature of conducting such an analysis.

Cost/benefit analysis

In essence, cost-benefit analysis determines all the costs and benefits, broadly considered, of a project or enterprise. If the analysis shows more benefit than cost (i.e. net benefits are positive) then the activity under examination can be said to be economically worthwhile (Armstrong, 1993; Hough, 1994; Phelps, 1996). In many cases cost-benefit analysis is a relatively straightforward exercise; however, in this case the analysis is more complex. The previous article "Assuring quality in access courses – the authorized version", highlights the various people and institutions involved in the external quality assurance processes – all of whom have their own distinct agendas relating to their needs for quality. For some these needs will be similar, but for others they may be unique. It is therefore possible for an AVA quality assurance process to have very different cost-benefit implications for the people/ institutions involved.

Through consultation with access tutors, course co-ordinators, college managers, students, higher education staff, AVA staff,

The author is indebted to Jasvir Kaur of the Department of Continuing Education at City University for her help with the research work on which this article is based. Comments given by Dr Pat Davies and Professor Peter Robert of City University also greatly assisted in shaping the work.

further education staff, “independent” panel members, representatives from HEQC, and commentators on access – a number of “actors” or “stakeholders” (Harvey and Green, 1993; Westerheijden *et al.*, 1994) who attract costs and benefits as a result of the quality assurance procedures initiated by AVAs become visible. These are:

- HE institutions;
- students on the access course;
- staff teaching on the access course;
- the access course providing institution (usually further education colleges);
- panel/recognition members (those excluded from the above);
- funders/sponsors;
- moderators (who may come from HE/FE institutions linked with the AVA or who may be independent of it).

Having identified the actors involved in the quality assurance processes it is possible to allocate certain costs and benefits to the various groups, as shown in Table I. This table highlights not only the tangible (quantifiable) costs and benefits but also those that are less tangible or easy to quantify. Some may even be essentially qualitative and incapable of being measured in any comparable way to the other cost-benefit factors. The list is not exhaustive but indicative of the general costs and benefits incurred by the various “actors” taking part in the quality assurance activities. A problem with conducting an exercise of this type is how to separate out those factors that are purely as a result of the external quality assurance activities and those that are as a result of other influences (for example, internal, or college-based quality assurance

Table I Costs and benefits to the individual actors/stakeholders

Actor	Cost	Benefit
Higher education institution	AVA membership Sending staff to panel meetings Sending staff on moderation duties	Funding from access students entering their programmes Influence on access course development
Students on the access course	Time commitment to QA activities such as feedback	Increased confidence Increased earnings following graduation
Staff teaching on the access course	Time commitment at panel meetings Moderation activities Course development/review activities	Use of QA processes as a lever for more resources for their access programmes Curriculum development through attending other panels/moderation activities Staff development through attending training sessions organized by AVA
The access course providing institution	Course provision Increased resource requirements (e.g. crèche facilities) AVA membership Recognition/registration fees	Funding Improvement of other (providing institution-based) QA systems Staff/curriculum development through attending other panel meetings and development sessions organized by AVA
Panel/recognition meeting members (excluded from above groups)	Time commitment at panel Moderation activities	Curriculum development for their own programmes Staff development (e.g. how to present courses for recognition, the politics of access) Access students progressing to their programmes/institutions
Funders/sponsor	Funding	Better trained workforce Fewer unemployed (as they are on access course, higher education course or in employment)
Moderators	Time commitment	Influence on access course Better links with providing institution Status Fees

activities). Some factors, such as increased confidence for students, may draw on more than one influence but as they, at least in part, draw influence from the external quality assurance processes, they are included in the analysis. The importance of each influence is currently being examined by the author and will not be discussed further here.

The factors outlined in Table I are under various stages of investigation by the author; the two that will be detailed here are one factor that is relatively easy to quantify (although not without some difficulty), and one that is not so readily measurable.

The costs to the recognition panel members

Panel members have one immediately visible “cost” that of time spent at the panel (plus travel expenses). This is relatively easy to calculate as the AVA involved produces a panel report which usually has the time spent at panel indicated within it. However, there is an additional element here – the amount of time spent preparing for the panel. Before a course comes to panel its documents are circulated to the panel members and they are requested to read these documents in advance of the meeting. Therefore some preparation time should also factor in the “time” cost.

If three hours are spent at the panel and one hour, say, spent on preparation, how should this time element be converted into a financial cost? A value could be produced by calculating the panel member’s hourly salary by the time spent at the panel and preparing for it. For example, one panel member, who is a lecturer in an FE college, may have an hourly salary equivalent of £25 per hour (plus any on-costs), therefore giving a notional cost for the panel process of $£25 \times (3 + 1 \text{ hours}) = £100$. However, the distinction between actual and notional costs is important here (Drummond *et al.*, 1987; Fielden and Pearson, 1989; Mishan, 1988). Notional costs can only become actual if the FE lecturer would have been employed at the time of the panel doing something else (teaching). Therefore, while the notional cost of a large panel meeting with, say, 20 members may be quite high, the actual cost may be lower as the panel members are present during their “free” time – they would not normally be teaching or employed elsewhere during the panel. What value should be placed on this “free time”? Phelps (1996) drawing on other work throws some light on the subject by stating: “it is

economists’ convention to value personal time at a substantially lower rate (half the wage rate being typical)” (Phelps, 1996, p. 7). This would provide a reduced notional cost to the panel member of $£12.50 \times (3 + 1 \text{ hour preparation}) = £50$.

The benefit of increased earnings for the students

When examining the purposes of education economists have generally taken the view that, put simply, it is to increase the earning power of those people who are educated – providing returns on investment made to society (social rates of return) and to the individual (private rates of return).

By looking at the difference between graduate and non-graduate earnings as Psacharopoulos (1985) and others have done, a “benefit” figure can be established that is a result, at least partly, of education received. However, this “benefit” is usually attributed to higher education (a degree of some sort) (see for example Psacharopoulos, 1985; Woodhall, 1972) – whether this benefit can be attributable to an access course is debatable. Of course, at least some of the benefit is attributable to the student having experienced an access course (developing interpersonal skills and the like that are put to use in subsequent education) but it is suggested that this decreases with time and by far the most “employable” factor is that the student has graduated from a degree programme. On the other hand, it might be argued that a greater proportion of the benefit should be attributable to access because if students had not studied on an access programme they would not have gone into higher education at all and, therefore, would not have achieved the increased earnings associated with graduates. The amount of earnings to be attributed to the access course is thus problematic and contested. When attention is focused on the quality assurance arrangements, a further layer of complexity is added. The key question then becomes how much of the benefit – in this case increased earnings – is attributable to the course and how much to the quality assurance arrangements? It could be argued, for example, that the quality assurance arrangements mean the students have a better chance of successfully completing the course or of obtaining a place in higher education, and therefore achieving graduate earnings. However, the first step is to calculate the increased earnings attributable to

the course itself and this section focuses on this first stage.

In order to attribute some of the benefit of increased earnings for a cohort of students, the percentage that progress on to higher education and employment following higher education must be established. Although some work has been done on completion and progression rates into higher education these can vary from around 30 to 70 per cent (Capizzi, 1996). If progression rates are available for a particular course these can be inserted in the example decision tree shown in Figure 1. This "tree" highlights other areas for consideration such as those students who do not enter HE but enter employment or begin training programmes. Other issues that emerge here include the fact that there may be a number of students on access courses studying purely for the enjoyment of it – who do not progress to graduate status because they choose not to. These then reduce the graduate earnings benefit for the whole cohort. Is this a distortion of the situation? Are there other benefits associated with withdrawal which should be included? Additionally, what should be done about the students who study only part of the access course and decide to complete it later on in their life when other commitments allow? The same applies to those who do complete the course but other commitments prevent them, at the moment, from entering higher education.

The above questions require specific data, and a good many of them, that track access students from enrolment onwards (into higher education, employment, unemployment, other training programmes, etc.) in order that generalizable claims of financial benefit can be made and usefully incorporated into any cost-benefit model. While a generalized model requires generalized data on progression based on large-scale information, for a cost-

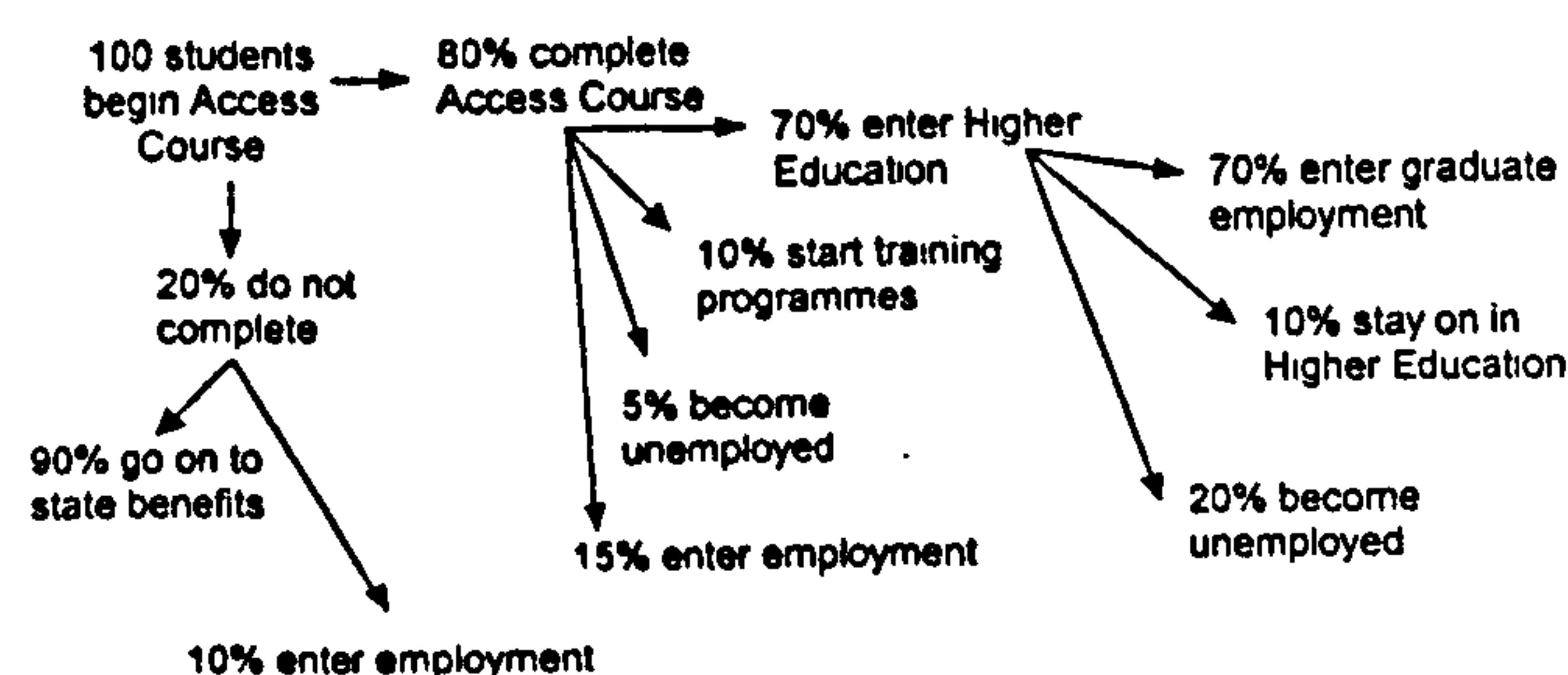
benefit analysis of a particular course – the specific known data can be used.

Having stated earlier that a benefit figure can be obtained for graduates (by subtracting the per annum income figure for non-graduates from that for graduates) – even this, seemingly easy task has its difficulties. To establish the benefit of increased earnings of graduates against non-graduates requires, ideally, that the incomes of the two groups be analysed over their respective working life-times. This is practically impossible as it would require approximately 40 years of data. Therefore, to address this problem, economists have developed "age earnings profiles" that rely on cross-section data, i.e. snapshot evidence of cross-sections of society at one moment in time. To be reasonably representative in this exercise an element known as the "alpha coefficient" (Hough, 1994) or "ability coefficient" is often included. This coefficient is the adjustment made to account for differences in incomes attributable to factors other than education, such as innate ability, personality, favourable home background and social class. Denison (1964) suggested that 66 per cent of the difference was attributable to education (a co-efficient of 0.66) although it was based on US men only (Hough, 1994). Work done elsewhere suggests that a co-efficient of 0.7 or 0.8 might be more appropriate (Psacharopoulos, 1985) although clearly this is likely to vary across countries since both education systems and labour market conditions are not identical.

A problem of using cross-section data is that although the alpha-coefficient irons out factors other than education affecting income, it does not take account of changes in the economy such as changes in demand and supply of educated people, and the effects of trends over time such as changes in the rate of economic growth. With reference to the latter, Becker (1974) (in the USA) suggested adding the annual expected increase in real income per head and Zidderman (1977) in his work in the UK added a "conservative" 2 per cent per annum to all incomes. This was a technique that Blaug *et al.* (1969) used in their work in India. Although a technique such as the above would take into account the environment in which the educated reside, to add a fixed percentage adjustment in this way assumes that income differentials will remain constant over a period of some 40 years, which seems very unlikely (Hough, 1987).

A further layer of complexity arises from different forms of education which appear to

Figure 1 Access course "decision tree" (these figures are for demonstration purposes only – they do not reflect actual numbers)



have different rates of return. For example workers with agricultural education earn 28.3 per cent less and workers with technical education earn 6.6 per cent less than workers with general qualifications. Other types of education are not rewarded significantly different from general education (Groot, 1994). This has implications for the calculation of benefits to students graduating and finding employment.

In addition, access course students are not “average” students as access courses are specifically targeted at disadvantaged groups such as ethnic minorities and mature learners who may experience different rates of return from those outlined above. Also, the majority of access course do not lead to high status (and highly paid) employment.

The benefit of increased earnings could be reduced by “emoluments forgone” i.e. there is an opportunity cost to students throughout their time in education. For example, while a student, after completing an access course (or we may even include the time spent on the access course), is studying for a higher education qualification (normally three to four years full-time) he/she is not earning. However, Hough (1994) poses the question: “if the process of education is pleasurable, as one must hope that it is for most students most of the time, then are we justified in stating the time so spent as a cost?”

Concluding remarks

At present, the author is working on a model which includes earnings forgone at the individual student level and takes account of the probability of achieving graduate status and earnings using analysis of cohort progression. It also incorporates a co-efficient derived from the particular characteristics of the access students and their probable career routes and future occupations.

This paper has highlighted areas of costs and benefits associated with the quality assurance mechanisms involved with access education. The factors are not exhaustive but indicative of the number and type of costs and benefits incurred. Reference has been made to the problematic nature of conducting an analysis of this type when the needs for quality differ between the “actors” or “stakeholders” involved – a cost to one may be a benefit to another. Additionally, other influences outside of the external quality assurance mechanisms may be responsible, in part, for some of the costs and benefits. The author is currently working on the notion of apportioning costs

and benefits to the various influences involved. The field is very complex and the author would welcome feedback on this work.

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CONCLUSION

At the heart of developing a unified credit framework across FE and HE is the enormous challenge of converging the separate FE and HE approaches to credit. It is this particular aspect of the NICATS Project which differentiates it from much of the current development work on credit frameworks within the FE and HE sectors. This challenge is further enhanced by the rapid developments now taking place in relation to national qualification framework developments, ie the 16–19 qualifications framework which is the responsibility of the national qualifications regulatory bodies (ie the Qualifications and Curriculum Authority (QCA) in England; the Qualifications, Curriculum and Assessment Authority (ACCAC) for Wales, and the Council for Curriculum, Examinations and Assessment (NICCEA) in Northern Ireland) and the HE qualifications framework which is the responsibility of the Quality Assurance Agency for Higher Education (QAAHE). It is important that these developments are informed by the NICATS work and, conversely, if there is an agreed or imposed national credit framework which spans both further and higher education, it will be necessary for NICATS to articulate with that framework. At the same time the move towards curriculum unitisation in the FE sector is likely to take place along the lines pioneered by the Open College Network and the Welsh Credis Project. These appear to vary considerably from current developments in HE. In this context the NICATS Project may face insuperable obstacles to achieving its goal of a seamless and unified credit framework which can allow for meaningful and efficient progression for learners.

Given Government's current key agenda for lifelong learning, however, it can be contended that the model proposed by NICATS can make a meaningful contribution to developing the framework in which initiatives such as University for Industry and Individual Learner Accounts will work to enhance accreditation and progression opportunities for all learners. The NICATS Project is therefore timely and relevant and should be used to inform national developments in further and higher education.

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What does HE gain from participation in Access validation?

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As Access Course provision has grown over recent years questions have been raised concerning the effectiveness and efficiency of such provision and the difficulties associated with measuring these factors (Davies, 1994). In addition attention has been focused on the suitability of the arrangements for assuring the quality of Access Course provision (Parry, 1995). This paper explores the gains or benefits to higher education institutions accruing through their participation in the quality assurance activities of those directly charged with assuring the quality of Access courses – Authorised Validating Agencies (AVAs). The paper forms part of research being carried out by the author examining the costs and benefits of the AVAs' quality assurance activities. In relation to higher education stakeholders in the quality assurance processes, this

paper focuses upon three of the identified beneficial elements of the quality assurance mechanisms:

- *recruitment of students;*
- *retention/fulfilment of those students;*
- *staff development/networking opportunities arising as a result of a higher education institutions involvement in the quality assurance processes.*

ACCESS COURSE RECOGNITION

The literature on access to education has increased rapidly over recent years. The *Journal of Access Studies* was dedicated to the study of access to education and this, its replacement journal, will continue to cover access issues. Various other publications also cover the area (Davies and Parry, 1993; Tight, 1995; Wilkinson, 1997a). The increased awareness of, and interest in, the subject is seen as one of the major policy issues in post-school education (Tight, 1995). Access courses, despite their chequered history (Parry, 1996; Lieven, 1989), have been further legitimised since the government first identified them as eligible for financial support from the then proposed FEFC (Secretary of State for Education and Science *et al*, 1991).

The foundations for this increased legitimacy were established in 1989 when the then Secretary of State for Education and Science invited the Council for National Academic Awards (CNAA) and the Committee of Vice-Chancellors and Principals (CVCP) to set up a national framework for the recognition of Access Courses – the Access Courses Recognition Group (ACRG). The ACRG was a central body responsible for overseeing the co-ordination of standards in Access Courses across England, Northern Ireland and Wales and was made up of representatives from universities, polytechnics, further education colleges, local education authorities, CVCP and CNAA. This central body, later replaced by HEQC's Access Course Recognition Subgroup, is now the responsibility of the Quality Assurance Agency for Higher Education (QAA) (an organisation formed in 1997 to carry out the functions of HEQC and the quality and assessment functions of the English and Welsh higher education funding councils through issuing licences). The successive central group empowered local agencies, usually comprising Higher Education Institutions, Further Education and Adult Education institutions, to validate Access Courses. These Authorised Validating Agencies (AVAs) as they are now known, validate programmes through initial approval, annual monitoring and periodic review.

Although AVAs differ in size, constitution and method of operation they all require some Higher Education Institution (HEI) involvement in their procedures before authorising recognition to an Access Course. Essentially there are three stages to the Access Course validation process:

1. course development;
2. the panel process;
3. post-panel activities, such as moderation and periodic review of the course. (Wilkinson, 1997a)

Higher Education involvement usually occurs in stages 2 and 3 of the above processes. The level of involvement in these activities can vary across AVAs and may even vary within the institutions depending on such factors as the size of the validating agency, the links between the validating agency and the HEI, and the links between the HEI and the Access course providing institution.

Choice, through the influence of a few key personnel tends to dictate the level of extra involvement a HEI gives to the Access course validation process through the activities of the AVA. This is above and beyond the financial commitment all HEIs provided to HEQC (and presumably now provide to the QAA) for the operation of the National Framework. This is approximately equivalent to the notional budget of the Access Courses Recognition Subgroup divided by the number of contributing HEIs – £100,000 / 150 = £667 (although size of institution may have some effect on the actual contribution made) – irrespective of their desire to involve themselves further with Access course validation procedures. These figures were verified as 'reasonably accurate' in a personal communication between the author and the late Dr Philip Jones – Assistant Director, Quality Assurance, HEQC (Spring 1996).

Work currently being carried out by the author, in part fulfilment of a PhD at City University, has identified a number of 'actors' involved with the external quality assurance mechanisms and the effects, in terms of costs and benefits, these external (AVA) quality assurance mechanisms impose on these actors (Wilkinson, 1997b). They comprise the Access course providing institution, the Access students and the HEI participants in the external quality assurance processes. Various cost and benefit factors have been identified for all of these 'actor' groups and the author is currently investigating the values attached to each of these factors.

By tracking a number of case study Access courses – from initial development to the panel processes and moderation activities – the 'actors' involved in the external quality assurance processes have been ascribed cost and benefit elements associated with their participation in the quality assurance activities. The work is based on four case study Access courses, focusing on a range of disciplines, validated by three different AVAs during the academic year 1996/97. Although the AVAs differ in size, construction and method of operation they all meet the general requirements of the central licensing body (at the time of the study this was HEQC's Access Courses Recognition Subgroup). Although it is difficult to firmly identify elements that are solely a result of the external quality assurance activities, and because the findings

are based on a limited number of case study courses, the results provide illuminative, if somewhat crude, estimates as to the value of participation. They represent broad indications of what the costs *may* be rather than what they actually are.

ESTIMATING THE COST OF HIGHER EDUCATION INVOLVEMENT

The costs of participation in the external mechanisms as far as many of the HEIs involved were concerned consisted of the staff time given up to the quality assurance activities. In the main this was split between attendance at panel meetings and moderation activities. In the case of Access course 'A' commitment consisted of five hours at panel and three half-day visits for moderation purposes – a total of 17 hours for the year. To use accounting terminology this effort produced a 'return' for the HEI of 13 students, if it is assumed that all of these students came from this particular Access Course – which may be unusual but not unheard of given the close working relationship some Access Courses have with some HEIs. Using simple arithmetic the net benefit of this level of participation in the quality assurance mechanisms would be the number of hours given up multiplied by the hourly salary (plus on-costs) set against the number of Access students entering the HEI from the case study Access Course multiplied by the fee income they would generate. For Access Course 'A' this resulted in the following:

13 students entering the HEI – with a fee income of approx. £2,000 per student (although this will depend on the discipline studied) = £26,000

17 hours given up by one HEI to the quality assurance activities at a cost per hour (including on-costs) of approx. £60 (figure provided by HEI – although this figure may vary depending upon the seniority of the staff member participating in the quality assurance activities) = £1,020

£26,000 – £1020 = £24,980

Even when taking into account the proportion of the cost of membership of the validating agency (around £200 p.a. 'fee' in total for the HEI) and the proportion of the HEQC National Framework operating budget (around £667 p.a. in total per HEI) the net benefit of participation in the external quality assurance mechanisms still appears very favourable. However, it could reasonably be argued that a HEI would attract Access students irrespective of their involvement with the external quality assurance processes of the Access students' course. If this is the case then factors other than *purely* financial need to be considered.

NON-FINANCIAL BENEFITS

Through data gathered via telephone and face-to-face interviews with HEI moderators, panel members and others involved with Access course quality

assurance the author has developed a general list of benefits a HEI may acquire through participation in these activities. These included: influence on the Access programme and other programmes offered at the providing institution. Further questioning framed as: 'What would your institution lose if it were not a member of an AVA?' provided the following responses from HEI respondents:

- influence on local Access provision would be lost;
- there would be less opportunity to develop and improve links with FE colleges and build up trust with them;
- membership of an AVA may improve recruitment;
- staff development opportunities would be lost;
- external quality assurance mechanisms for Access require that certain provision such as study skills should be adequately provided in the Access programme. This 'reassures' HEIs and may have some effect on the retention and eventual achievement of the Access student at the HEI; and
- AVA membership provides a 'route for keeping up to date with what's happening [in Access]'.

RECRUITMENT, RETENTION, ACHIEVEMENT AND STAFF DEVELOPMENT

Three of the most common areas outlined above were developed further with a number of different HEIs. These three areas were:

1. recruitment;
2. retention/achievement;
3. staff development/networking opportunities.

All the HEI staff members contacted agreed that these areas were influenced by the external quality assurance mechanisms and had some beneficial effect for the HEI – but, perhaps understandably, they found it very difficult to measure their effects in a quantifiable way. Part of the problem was the lack of a control group with which to compare the data and also that the influence of the external mechanisms would 'vary so much [across courses and with individuals]'.

Many respondents felt that through their membership of an AVA and their participation in validation activities they were able to develop formal and informal links between Access courses and HEIs. Some felt that there was a positive correlation between the number of hours given up by staff members to the external quality assurance mechanisms and the number of Access students recruited. The Access Officer at HEI 'A' affirmed this:

...our input has dropped – into the external quality assurance mechanisms – because we no longer have as many fixed-link Access programmes. If you add up all the hours put in by members of staff to those courses it would

probably have been higher than it is now with very few fixed-link courses.

An Access Co-ordinator at HEI 'B' commented that the level of influence on recruitment of the external quality assurance would additionally depend on the processes of the AVA concerned and the value of recruitment benefits could even 'vary *within* an AVA – never mind within the National Framework!' The publication of 'Access Course Directories' and issuing of credit statements/records of achievement by AVAs also benefited this HEI in terms of recruitment as they decreased the burden of recruitment activity carried out by the HEI in matching up appropriately qualified students to appropriate courses. One contact at HEI 'C' commented that:

The information within these data sources [Access Course Directories, credit statements, records of achievement] is of great value as they detail the course content, structure, contact hours, and provide contact names and addresses.

With all three of the identified areas of recruitment, retention/achievement and staff development/networking, the level of benefit of the external mechanisms experienced by the HEI was dependent upon how well developed their internal quality assurance processes and procedures were. For example, recruitment activity may be focused outside that provided by the external mechanisms. As a result the external mechanisms may have little or no beneficial effect for the HEI. This was highlighted by an Access Officer at HEI 'A' who commented:

Because our recruitment strategy is quite good the effect of the external mechanisms is negligible. For example, we have very strong links with associate colleges, we invite students in and provide them with associate student status (ie those of linked colleges) which allows them to use the library and computing facilities and introduces them to the Higher Education environment. They are given a great deal of guidance by us as to the 'correct' route they should take through HE...

One HEI involved in the research is very influential in the practices and procedures of the AVA to which it is a member as it is the only University member and enrolls most of the AVA's Access students on to its courses. As a result communication between the HEI and the Access course providing institutions takes place very frequently (through attendance at panels and moderation activities) but they also occur *outside* of this external quality assurance activity.

Nevertheless, bearing in mind the above caveats, when asked how much of the recruitment of Access students was as a result of the external quality assurance mechanisms, all the HEI staff members provided percentages ranging from 0 to 60 per cent – although some found it crude to quantify recruitment effort in this way.

That is to say x per cent of recruitment to a higher education course at a particular university was as a result of that university's participation in the AVA's quality assurance activities.

Additional problems encountered with retention/achievement tended to focus around the differences encountered across subject areas – Law and Science commonly being cited as examples. One Access Officer, who found it difficult to ascribe values added:

...the students from Access programmes are among those we retain. Therefore there is an effect on retention/achievement but I'm not prepared to put it into numbers or percentages. It would be *very* variable across courses.

Following consideration of these difficulties other HEI representatives provided a range of 0 to 60 per cent beneficial influence on retention/achievement of the external quality assurance mechanisms.

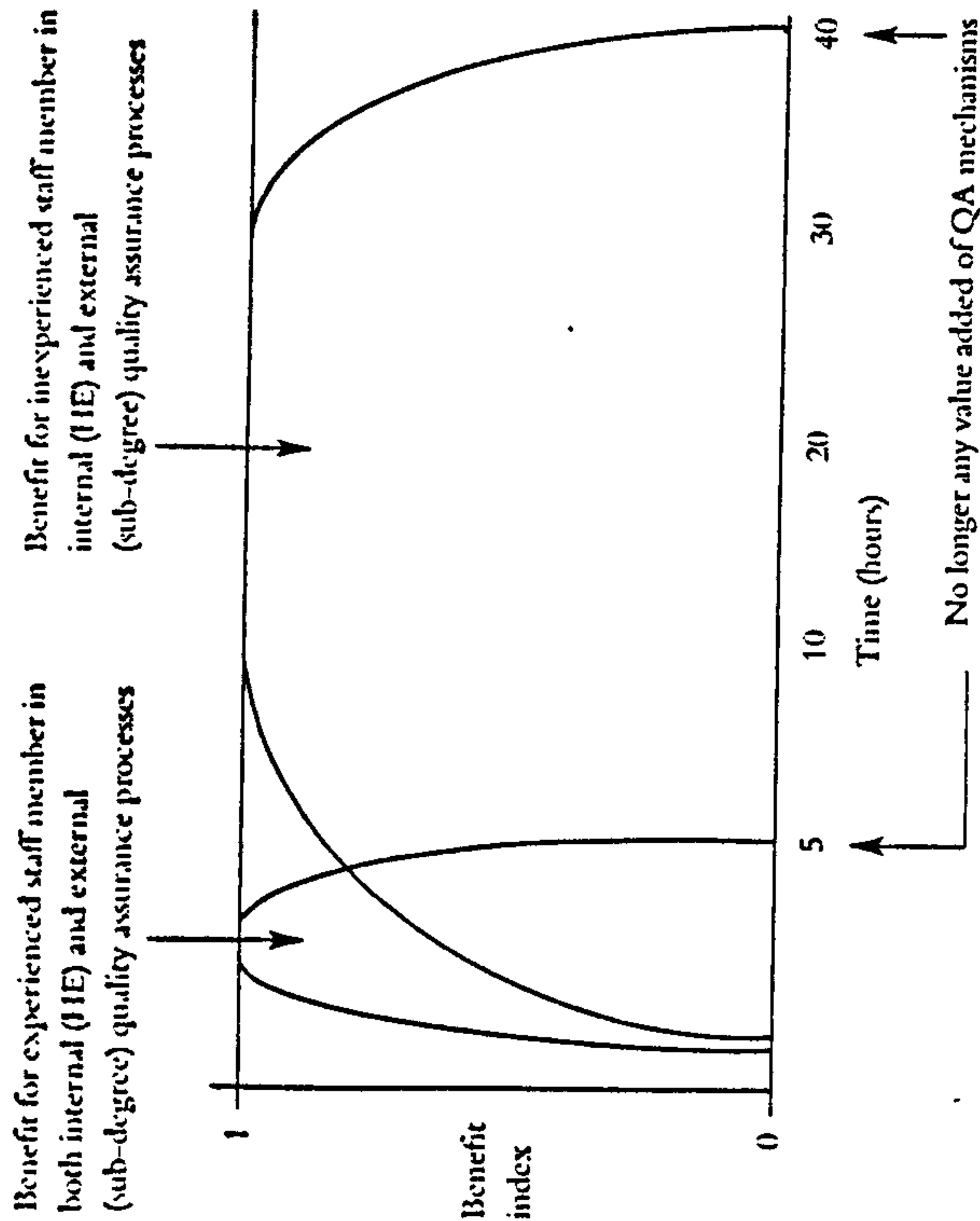
The level of benefit gained in terms of staff development/networking activities can also vary and '...depends on the job the member of staff involved has in the University.' One Dean of School, in HEI 'C' argued that a course administrator or manager may be required as part of his/her job to be knowledgeable in quality assurance issues. This may be gained through attending internal panels, representing the University within national bodies etc. However, academics may not spend as much time, or may not be available to spend as much time, on quality assurance related issues. Therefore for these members of staff the external mechanisms will be of greater benefit as they will provide the major source of staff development.

Despite this, the staff development/networking benefit of the external quality assurance mechanisms was felt to be quite small – ranging from 0 to 20 per cent. That is to say, any staff development/networking benefit gained by a HEI 'actor' during the course of one year was as a result of the external quality assurance mechanisms. Commenting on this low figure one Access Officer said that this was because staff development/networking was the result of various activities and not just those initiated by the AVA. However, the cost-effectiveness of the AVA's activities was noted:

...if we weren't going to [the AVA]... to get this information we would have to spend at least the same time going to conferences and workshops – which would cost more than that in terms of fees and travel than the £150 membership [of the AVA...]. The benefits of the work outweigh the costs of having to get the information in other ways.

Without exception, the questions that focused on staff development/networking benefits produced the most lengthy responses, although some respondents still had difficulty in quantifying these benefits. To explore this area further the respondents

FIGURE 1. MAXIMUM VALUE-ADDED OF THE EXTERNAL QA MECHANISMS TO STAFF DEVELOPMENT/NETWORKING



were presented with Figure 1. This was adapted from Drummond's (1993) model, used in health-care scenarios to establish the beneficial effect, in terms of Quality Adjusted Life Years (QALYs) a patient may expect to gain from a given treatment.

Figure 1 suggests that following a number of 'hours of exposure' to the external quality assurance mechanisms the benefit to a HEI staff member or actor, in terms of staff development or networking would 'tail' or 'level' off. The number of hours at which maximum value would be added, in terms of staff development or networking would be within a range that depended upon the individual staff member's experience of internal and external quality assurance mechanisms. Given these variable elements, six scenarios are possible:

1. A staff member inexperienced in internal (HE) and external (sub-degree) quality assurance (eg a new recruit);
2. A staff member inexperienced in internal (HIE) quality assurance;

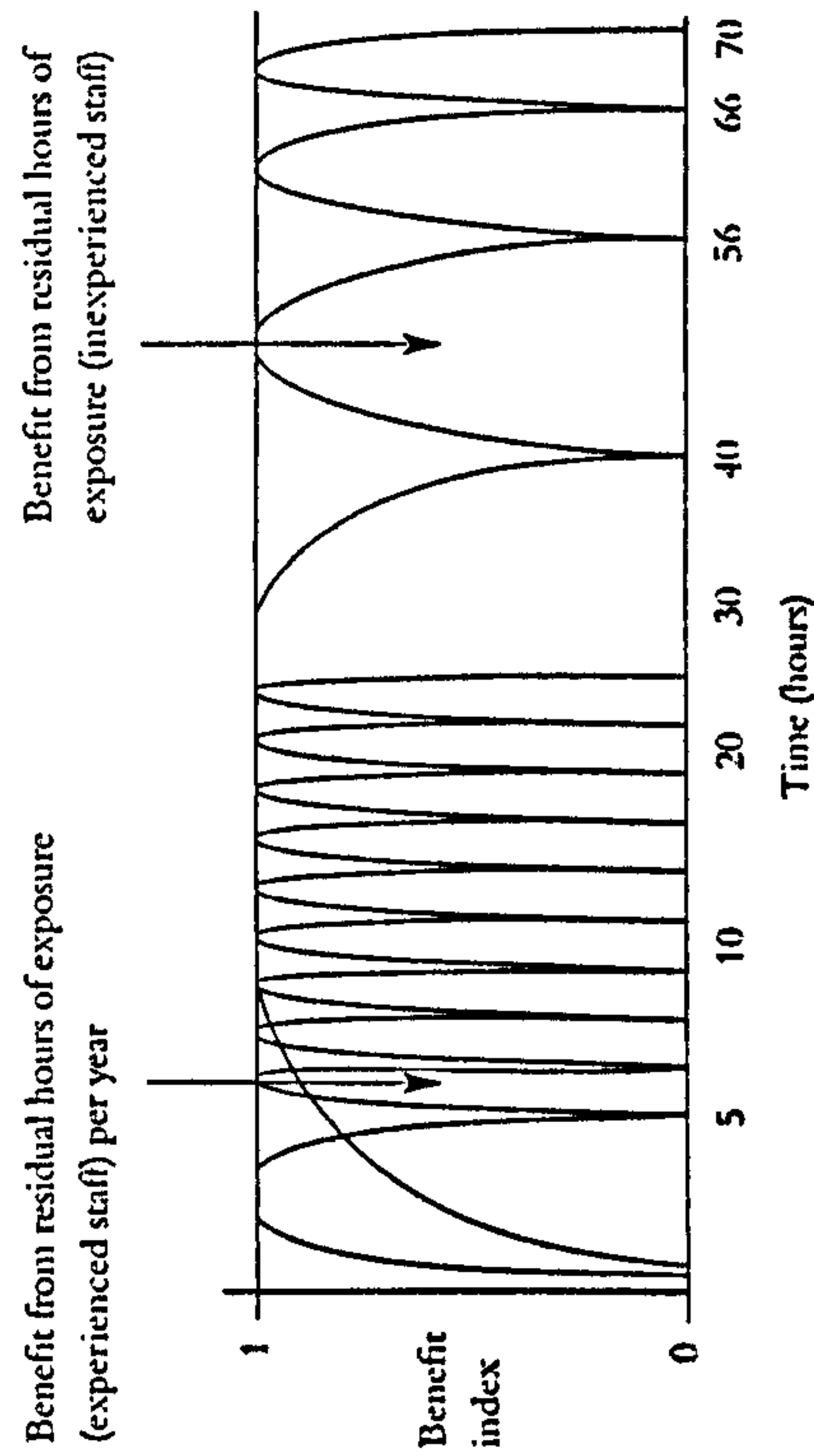
3. A staff member experienced in internal (HIE) quality assurance;
4. A staff member inexperienced in external (sub-degree) quality assurance;
5. A staff member experienced in external (sub-degree) quality assurance; and
6. A staff member experienced in both internal (HIE) and external (sub-degree) quality assurance.

It is acknowledged that there may be a wide variation within these categories, and the scenarios presented may oversimplify the complex interaction which takes place between, say, higher education and further education.

All respondents agreed that the maximum added value to staff development of participation in the external quality assurance mechanisms would decrease with the staff member's level of experience of quality assurance processes. However, many added to this that there would be additional hours of involvement per year to keep informed with Access developments as '...the nature of Access development is constantly changing' and by giving up a number of residual hours per year to the external mechanisms it '...facilitates networking and [helps us to] keep informed of current practices'.

The maximum value of adding hours of exposure to the external mechanisms ranged from five for experienced members of staff to 40 for non-experienced staff. That is to say following x hours of exposure to the external quality assurance mechanisms the beneficial value of involvement would 'level' or 'tail' off. The

FIGURE 2. VALUE-ADDED OF THE EXTERNAL QA MECHANISMS TO STAFF DEVELOPMENT/NETWORKING WITH RESIDUAL HOURS OF EXPOSURE



residual hours per year ranged from two to 16 for experienced to non-experienced staff. As staff members became more experienced their residual hours of exposure per year would drop to that of experienced staff. The result of this is shown as Figure 2.

CONCLUDING REMARKS

This paper has shown that there are benefits above and beyond the immediately financial for HEIs participating in Access course validation. However, the value placed upon them can change across institutions and even within them. Compounding this is the evidence that some AVAs' quality assurance mechanisms provide 'better' returns on investment than others. An increasing focus by HEIs on the return on investment offered by participation in the external mechanisms – brought about by the squeeze on student numbers and increasing numbers of students undertaking typical HE provision at FE colleges (Sallis, 1993) will force a more detailed appreciation of the value of the external quality assurance mechanisms to HE.

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Learning how to learn:

a cross-curriculum approach to key skills in access to Higher Education

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The support given to open access undergraduate students to help them to develop the skills that will enable them to become successful adult learners has been re-evaluated in the light of recent changes and trends in Higher Education (HE). Using a metacognitive approach, it has been possible to design generic learning skills workshops suitable for students across the curriculum. The development of learning skills was linked with the teaching of the curriculum being followed by each student through tutor feedback on assignments obtained as a normal part of the study of their course. Learning-skills workshop participants were able to gain credit for work undertaken at the workshops through accreditation of the Qualification and Curriculum Authority (QCA) Key Skill, 'Improving Own Learning and Performance' at level 4.

THE INCREASING STATUS OF LEARNING SKILLS IN HIGHER EDUCATION

There has always been a need for non-standard entrants to HE to acquire robust skills of study in order to cope with the demands of degree level work. As an open access adult education institution, the UK Open University (OU) takes seriously the need for our students to develop skills that will enable them to become successful adult learners. These skills centre on learning how to learn and include other study-related skills, such as effective reading, note-taking, essay-writing and the use of English. Traditionally, this support has been focused largely on entry level courses (formerly known as foundation courses), not only through the design of course materials but also from the student's tutor-counsellor who provides tuition and educational counselling (which includes learning skills development) during the first year of study and who continues in subsequent years to be a personal point of contact (Bailey *et al*, 1996). However, recent changes have caused us to re-evaluate the support that we offer to our students to help them to develop these learning skills.

Changes in entry regulations for OU students, enabling learners to join the University on any course and at any level, have resulted in a number of inexperienced learners trying to cope with higher level courses and has therefore increased the need for a programme specifically designed to improve learning skills for *all* students. Another change concerns the elevation of 'lifelong learning' as a major theme in HE. As society has moved into the post-Fordist era, more importance has been placed on

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