EXPERT GROUP REPORT

FOR

AWARDS SEEKING ADMISSION TO

THE UCAS TARIFF

BTEC NATIONAL AWARDS
BTEC NATIONAL CERTIFICATES
BTEC NATIONAL DIPLOMAS

February 2003

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INTRODUCTION

The UCAS Tariff is a new points score system for entry to HE from September 2002. It replaces the existing A-level points system. The new system was developed to reflect a wider range of qualifications currently offered by applicants to and accepted by Higher Education Institutions. It also embraces substantial reforms to post-16 qualifications implemented from September 2000, popularly known as Curriculum 2000. These reforms completely restructured GCE A/AS levels, replaced the Advanced GNVQ with a suite of VCE awards, and introduced more emphasis on the attainment of Key Skills. For the first time, the points system accommodates Scottish Framework Qualifications.

The Tariff was developed with three specific purposes in mind as follows:

- To report achievement as a points score to Higher Education
- To allow admissions staff to make flexible offers
- To allow broad comparisons to be made between different types of achievement and different volumes of study

The table below shows the points values within the Tariff of the qualifications currently contained within the system:

UCAS Tariff (Revised March 2002)													
CACHE Diploma[1]		GCE and VCE Qualifications			Single Units		Score	Scottish Framework Qualifications					
Theory	**Practical**	**GCE/ VCE AS**	**GCE/ VCE A level**	**VCE Double Award**	**1-unit[2]**	**Key Skills[3]**		**Adv Higher**	**Higher**	**Int 2**	**Standard Grade Credit**	**Core Skills[4]**	
A				AA			**240**						
				AB			**220**						
B				BB			**200**						
				BC			**180**						
C				CC			**160**						
				CD			**140**						
D	A		A	DD			**120**	A					
	B		B	DE			**100**	B					
E	C		C	EE			**80**	C					
							72		A				
	D	A	D				**60**		B				
		B					**50**						
							48		C				
							42			A			
	E	C	E				**40**						
							38				Band 1		
							35			B			
		D				Lvl 4	**30**						
							28			C	Band 2		
		E			A	Lvl 3	**20**					Higher	
					B		**17**						
					C		**13**						
					D	Lvl 2	**10**						
					E		**7**					Int 2	

[1] The scores shown for the CACHE Diploma in Child Care and Education come into effect for entry to HE in 2003 onwards
[2]Covers freestanding Mathematics qualifications at level 3 and VCE units taken over and above those required to achieve the 12-unit Double Award
[3]The scores shown are for each of the individual key skill units in Application of Number, Communication and Information Technology which are ungraded.
[4]The scores shown are for each of the five Scottish core skills

The Tariff and the National Qualifications Framework

The Tariff gives numerical values to qualifications, and establishes agreed equivalences between the types of qualifications covered. The system allows broad comparisons to be made between applicants with different volumes of study and types of achievement. The equivalences derive from those established within the English, Welsh, and Northern Irish National Framework of Qualifications. Qualifications admitted to the framework are the subject of a rigorous regulation system operated by three sister regulatory authorities, led by the Qualifications and Curriculum Authority. The framework has been developed to give coherence and clarity to the provision of qualifications. It includes three broad categories of qualifications:

- General, e.g. GCE GCE A-level and the new GCE AS
- Vocationally-related, e.g. VCE A level, VCE AS and VCE Double Award
- Occupational, e.g. National Vocational Qualifications.

Details of the accreditation process are contained in the publication *Arrangements for the statutory regulation of external qualifications in England, Wales and Northern Ireland.*

The qualifications which form the subject of this report, the BTEC Nationals from Edexcel, the qualifications seeking entry into the Tariff, and the AQA AVCEs in Science and Media, the qualifications against which the BTEC Nationals are benchmarked, both fall within the vocationally-related category.

It was always envisaged that other qualifications would be brought into the Tariff system as they become accredited into the National Framework. The approach by Edexcel was made following accreditation of the BTEC Nationals in 2002.

The Tariff – promoting wider access to Higher Education

The Tariff is highly relevant in the context of the government aim to increase participation rates in Higher Education, in that it covers both standard and non-standard entry routes. One of the features of the expansion of HE over the last decade has been an increase in the types of qualification presented by applicants, some of which may be vocational, some general, some taken mainly by adults, and so on. The advantage of the Tariff is that it facilitates comparison across applicants with very different types and sizes of achievement. It also ensures that UCAS communicates information to HE admissions and academic staff about the nature of such achievements, and that entry requirement information is collected.

The qualifications now seeking entry into the Tariff tend to be used for progression for specific types of HE programme. For example, evidence is presented in this report of the relevance of BTEC Nationals to progression into vocationally related courses. In terms of the overall number of applicants to HE, the percentage progressing from qualifications such as these is currently small compared to say GCE A-level. However, it is anticipated that the number of applicants will increase significantly as the value of these awards becomes more widely known.

THE CONDUCT OF THE COMPARABILITY STUDY

In order to ensure a robust and transparent procedure for allocating UCAS tariff points to qualifications seeking admission to the framework, UCAS approached the University of Oxford, Department of Educational Studies for assistance in developing an appropriate methodology. Acknowledging the problematic nature of comparability studies, the Department proposed a procedure based on the premise that such comparisons can only be achieved through the exercise of collaborative judgement by an expert group. Guidelines were drawn up for the composition of the expert group, the evidence that would need to be collected and examined and the choice of a benchmark qualification. Procedures were developed for the conduct of the work of the expert group, including detailed sets of questions to be addressed at different stages in the process. Section 6 of this report illuminates these procedures and reflects the sets of questions and the decision making process in its structure.

The judgements made by the Expert Group in this report are presented as suggested allocations of UCAS points which take account of the size and demand of the award seeking admission to the Tariff and a candidate's level of attainment within that award. However, the guidelines provide for an automatic review process to be conducted at a later stage in the light of further evidence. This latter point acknowledges the fact that both benchmark qualifications and those seeking admission to the Tariff may still be relatively new. Consequently there may only be a relatively small amount of evidence available at the time of the work of the Expert Group. There is, therefore, a need to review the decisions of the Group when more evidence becomes available and when HE admissions tutors have gained more experience of using the awards as entry qualifications.

The work of the Expert Group is subject to a quality assurance procedure by the University of Oxford, Department of Educational Studies, which includes scrutiny of the Group's report by an independent auditor from the Department.

SUMMARY AND RECOMMENDATIONS

This report contains a detailed examination by an Expert Group of the BTEC National Awards, Certificates and Diplomas in Science and Media against the selected benchmark qualifications, the AQA Advanced Certificates of Vocational Education in Science and Media (AVCE). Section 1 of the report sets out the composition of the Expert Group. Sections 2 and 3 provide an overview of each set of qualifications. Section 4 illustrates the procedures followed by the Expert Group and reflects, in its structure, the sets of questions which were addressed and the Group's decision making processes.

As a result of its deliberations, the Expert Group agreed that:

- The aims of the two sets of qualifications are comparable
- The two sets of six and twelve unit qualifications are broadly equivalent in size and demand, as determined by an analysis of content and study time
- Both awards are underpinned by a similar range of theoretical knowledge and require application of this knowledge in different settings
- The modes of assessment place similar demands on the students
- The levels of performance required by the students are comparable
- **At the unit level** a BTEC Pass aligns with and AVCE Grade E, a Merit with Grade C and a Distinction with Grade A

However, the different approaches to awarding grades and the different rules of combination meant that it was not possible, **at the level of the qualification**, to align the grades of the BTEC Nationals to those of the AVCE without possible disadvantage in terms of numbers of points to candidates achieving particular unit grade profiles. Four options to resolve this issue were considered:

1. To align the BTEC Pass with the AVCE Grade E, the Merit with Grade C and the Distinction with Grade A, at the level of the qualification, because they are aligned at the level of the unit, and to inform HE Admissions Tutors of the anomalies occurring with the rules of combination.
2. To ask UCAS to consider the possibility of awarding Tariff points on a unit by unit basis.
3. To request that Edexcel alter their grading and combination processes for their qualifications.
4. To allocate UCAS Tariff Points on the basis of the scoring system internal to BTEC Nationals used to determine the BTEC grade(s) for the qualification.

It was noted that in practice some anomalies are likely to occur in qualifications where unit grade profiles are converted to overall qualifications grades. It was, therefore, decided to recommend that Option 1 should be adopted, with the proviso that UCAS should provide an explanation in future publications of the problems associated with the process of aggregating units to produce an overall grade for a qualification. The recommended Tariff Points for each of the BTEC Nationals is shown below.

National Award	National Certificate	National Diploma	Tariff Points	GCE/VCE A level
		D/D/D	360	
		D/D/M	320	
		D/M/M	280	
	D/D	M/M/M	240	
	D/M	M/M/P	200	
	M/M	M/P/P	160	
D	M/P	P/P/P	120	A
			100	B
M	P/P		80	C
			60	D
P			40	E

D=Distinction
M=Merit
P=Pass

SECTION 1: THE COMPOSITION OF THE EXPERT GROUP

The following individuals with expert knowledge and experience of the qualifications under consideration in this study were selected:

Henry Elliott, Edexcel Chief Verifier for Science
Philip Holmes, Edexcel Chief Verifier for Media
Stewart Chenery, AQA Chief Examiner for Science
Peter Wall, AQA Chief Examiner for Media
David Powey, Senior Lecturer, Department of Chemistry, University of Surrey
Lizzie Thynne, Senior Lecturer in Media Studies and Production, University of Sussex

The CVs of the six Expert Group members are provided in Appendix 1.

The following two senior representatives of Edexcel also attended the meeting:

Jill Lanning, General Manager, Policy, Planning and Implementation
Michael Hewens, BTEC Implementation Manager

Anne Matthews and Jennifer Tuson acted as facilitators for the work, ensuring that the Group worked systematically through the procedures laid down in the Protocol. Their CVs are also provided in Appendix 1.

Jill Johnson, Head of the Outreach Department at UCAS guided and supported the work. Helen Wakefield and Anne Marie Campbell, also of the Outreach Department, acted as Secretaries to the Group.

The whole process was overseen and quality assured by Dr Geoff Hayward, Lecturer at the University of Oxford's Department of Educational Studies.

SECTION 2: OVERVIEW OF THE BENCHMARK AWARDS

These awards were chosen as the benchmark awards since they represented the closest match in aims and content of qualifications which had already been admitted to the UCAS Tariff.

AVCE in Science

Aims and purpose of the qualification

Advanced VCE Science is designed to enable students to gain an understanding of a wide range of scientific applications. The qualification provides students with the essential skills, knowledge and understanding of the sector and gives an insight into career opportunities in scientific fields as well as enabling entry into Further or Higher Education programmes.

Broad Objectives

The AVCE in Science provides:

- a broad background of understanding and core knowledge but allows some scope to focus on a particular interest area
- a student-centred approach to learning with the opportunity to apply knowledge in a practical way
- the opportunity for centres to create and forge links with industries
- cross sector themes allowing students to gain an insight into e.g. telecommunications, environmental issues and catering.

Subject Specific Focus

The unit content provides students with:

- an awareness of how industry applies science;
- an opportunity to learn about the basic principals which underpin the application of biological, chemical and physical science;
- a balanced background of scientific applications and principles to give both breadth and depth to the student's knowledge and understanding;
- an introduction to a range of career possibilities which use aspects of science.

AVCE in Media: Communication and Production

Aims and purpose of the qualification

Advanced VCE Media is designed to enable students to gain an understanding of the key media production pathways and the application of media communication principles. The qualification provides students with the essential skills, knowledge and understanding of the sector and develops career opportunities in the media sector as well as enabling entry to Further or Higher Education programmes.

Broad Objectives

The AVCE in Media provides:

- a broad background of understanding and core knowledge but allows some scope to focus on a particular interest area
- a student-centred approach to learning with the opportunity to apply knowledge in a practical way
- the opportunity for centres to create and forge links with the media sector
- cross sector themes allowing students to gain an insight into related sectors, e.g. marketing and advertising

Subject Specific Focus

The unit content provides students with:

- knowledge of the key aspects of media production, the media industries and the consumption of media products
- an awareness of how the media industries apply new technologies and the implications of these for the production and consumption of media texts
- the opportunity to learn basic concepts for the analysis and interpretation of media products
- an understanding of professional working practices within the media industries and the influence of these on the production of media texts
- information about recruitment and training opportunities at entry level in the media industries.

History of the qualification

The present AVCE qualification has evolved from the GNVQ advanced scheme introduced in the early 1990's. The present scheme was introduced in 2000 as part of the curriculum 2000 reform. The Advanced VCE was designed to further enhance the motivation and achievement of Advanced VCE learners, improve the consistency and manageability of the qualification and incorporate an improved

quality assurance and assessment procedure. The present qualification requires candidates to complete both internal and external assessments. The internal assessment is tightly controlled by moderation procedures whilst the external assessment is subject to normal awarding procedures.

Entry requirements for the qualification

AQA recommends that students must have sufficient skills, understanding and knowledge in the key skills of Application of Number, Communication and Information Technology (e.g. at level 2) to cope with the demands of the programme.
Experience of intermediate level Science is desirable, either via GCSE, GNVQ or NVQ level 2.

Age of candidates

Typically the Advanced VCE in science is undertaken by post-16 students. There is no upper age limit.

Hours

AQA does not specify the number of hours required to complete the qualification. In many cases the programme will be timetabled to occupy two option blocks in a post 16 timetable thus taking 40% of available curriculum time. Students may take the double award in conjunction with one or two other A level subjects or perhaps another double award. Further combinations of A/S, A and single VCE subjects are possible.

Content and structure of the qualification

The AVCE in Science offers **18** units, **6** of which are compulsory.
For the AVCE double award a candidate must complete **12** units to include the 6 compulsory units and 6 chosen from the optional units of which at least 1 should be externally assessed.

Compulsory units

1. Investigating science at work.
2. Monitoring the activity of the human body.
3. Controlling chemical processes.
4. Controlling the transfer of energy.
5. Synthesising organic and biochemical compounds.
6. Carrying out scientific investigation.

Optional Units

7. Obtaining products from organisms.
8. Food science and technology.
9. Role of the pathology service in health care.
10. Biochemistry of health care.
11. Actions and development of medicines.
12. Colour chemistry.
13. Choosing and using materials.
14. Energy resources and the environment
15. Sports science.
16. Science in communication.
17. **Medical physics**
18. Laboratory organisation

Units shown in bold are externally assessed

Content and structure of the qualification

The AVCE in Media offers 16 units, 6 of which are compulsory.
For the AVCE double award a candidate must complete 12 units to include the 6 compulsory units and 6 chosen from the optional units of which at least 1 should be externally assessed.

Compulsory Units

1. Analyse media products
2. Skills development
3. Research for media production
4. Produce a media product
5. Media marketing
6. Media industries

Optional Units

7. The medium of sound
8. Creating moving image production
9. Planning an advertising campaign
10. Audience research
11. Producing radio
12. Desk top publishing
13. Writing for the media
14. Multimedia production
15. Working in the media
16. Investigating film

Units shown in bold are externally assessed.

Assessment – procedures, methods and levels

In common with other AVCE qualifications the AQA Science and Media qualifications are assessed by a combination of external assessment and internal assessment. There must normally be a minimum of one-third external assessment. Each unit is assessed by one method only. Each unit contains its own set of grading criteria contextualised specifically to the content of that unit.

The externally assessed units have been selected to support all pathways through the VCE. For

Science, the structured questions allow candidates to apply the knowledge and understanding gained from the 'What you need to learn' section of the units. The tests are 1 hour in length and offer no choice of questions. Questions are targeted to match the criteria given in the assessment grid, the highest proportion of questions being allocated to the E criteria. For Media, the external tests are two hours in length and consist of open questions designed to enable candidates at all levels of ability to demonstrate what they have learned. Two of the external tests require candidates to undertake research prior to the examination, based on preliminary material. All tests allow candidates to take two sides of written notes into the examination; these notes are marked as part of the candidate's examination script.

Exact grade boundaries are determined at Awarding Meetings. These meetings follow the 'Code of Practice' for the conduct GCSE, GCE, VCE and GNVQ examinations issued by the regulatory authority.

The internally assessed units (portfolio work) are marked by centres following the criteria contained in the assessment grid for each unit. AQA employs a team of 'Standards Moderators' who are responsible to the Principal Moderator in order rigorously to apply the appropriate standards in accordance with the 'Code of Practice'.

Grading

Differentiation within units is achieved by the awarding of points as follows:

A	19-24
B	16-18
C	13-15
D	10-12
E	7-9
U	0-6

The full range of grades is available for both the single and double awards.

- Double Award grades AA—EE
- Single Award grades A—E

The rules of combination to convert unit points to the overall qualification are given at the end of Section 4.

QA systems and code of practice

AQA is subject to the 'Code of Practice' issued by the regulatory authorities and rigorously applies this to all standardisation, marking and awarding procedures throughout the qualification.

To assist with the assessment of portfolio work annual standardising meetings are held. Centres entering candidates for the first time must send a representative to the meetings.
AQA in addition insists on attendance where:

- there has been a serious misinterpretation of the specification;
- the nature of the portfolio work has been inappropriate;
- there has been a significant adjustment in the centre's marks in the previous year.

In addition AQA requires that internal standardisation takes place within centres.

SECTION 3: OVERVIEW OF AWARDS SEEKING ADMISSION TO THE TARIFF

BTEC Nationals in Applied Science

Aims and purpose of the qualifications

The BTEC Nationals in Applied Science are designed to provide programmes of learning that focus on the scientific workplace and develop the practical, academic and personal skills required for a career in science or to progress to further studies of science.

In particular they aim to:

- develop knowledge and understanding of science and of its applications within industry and the community
- develop a range of cognitive, practical and personal skills and the ability to apply them in appropriate contexts.
- provide opportunities for learners to develop a range of skills and techniques and attributes essential for successful performance in working life.
- provide a focus on the role of the science technician in a variety of contexts
- provide opportunities for learners to focus on the development of the major key skills and the wider key skills in a science and technological context
- form the bases for career development or for further studies.

BTEC Nationals in Media

Aims and purpose of the qualifications

BTEC Nationals in Media are designed to provide specialist work-related qualifications in a range of sectors. They have been developed to provide a preparation for employment and/or to provide career development opportunities for those already in work

In particular they are designed to:

- provide an educational foundation for a range of careers in the media industry and allied sectors
- provide specialised studies directly relevant to the vocations and professions in which learners are working or intend to seek employment
- enable learners to make an immediate contribution in employment
- provide flexibility, skills, knowledge and motivation as a basis for future studies and career development
- develop learners' abilities in media through effective use and combination of the knowledge and skills gained in different parts of the programme
- develop a range of skills and techniques, personal qualities and attitudes essential for success in working life.

History of the qualification

The National Certificate has formed the bedrock of part-time work-related education for almost 50 years. It has, in various forms, been awarded by regional examination boards, TEC, BEC, BTEC and Edexcel. The National Certificate has contributed to the career development and for access to higher education for generations of young people.

The full-time National Diploma developed in the 1970s in response to a decline in job opportunities for young people in many traditional sectors of employment. The National Diploma traditionally included more units than the National Certificate to facilitate the development of life and vocational skills previously gained in employment.

Since the formation of BTEC, National programmes have operated under BTEC/Edexcel guidelines that specified programme and unit structures, content and assessment requirements. Assessments were required to be criterion referenced. The guidelines gave considerable flexibility to focus on locally important employment opportunities.

The revisions of the guidelines and specifications in the mid-1990s specified, for the first time, mandatory criteria to achieve a pass in each unit. Guidelines were provided for the centres to devise criteria for merit and distinction. The purpose of defining pass criteria was to be able to define and measure the national standard more precisely.

The specifications introduced in 2002 have several new features. The new qualification of BTEC National Award is introduced to make BTEC programmes more accessible within Curriculum 2000

programmes. Both National Certificate and Diploma programmes become mode-free, to allow greater flexibility of access and study. Mandatory criteria for pass, merit and distinction grades are specified in each unit. External assessment is introduced, to meet the criteria for accreditation onto the National Qualifications Framework.

The above changes bring the BTEC National programmes into line with national requirements on structure. They do not, however, change the basic principle of the BTEC National, which is to provide programmes that provide opportunities for academic and personal development through study of the workplace, and of the knowledge and skills required for success in employment. The knowledge and skills developed form the bases both for career development and for further studies at higher levels.

Entry requirements for the qualifications

Centres review the profile of qualifications and/or experience held by applicants, considering whether this profile shows an ability to progress to a Level 3 qualification. For learners who have recently been in education, the profile is likely to include one of the following:

- a BTEC First qualification in Applied Science/Media or a related vocational area
- an Intermediate GNVQ in an appropriate vocational area
- a GCSE equivalent to four passes at grades A to C.

More mature learners may present a more varied profile of achievement that is likely to include experience of paid and/or unpaid employment.

Age of candidates

The BTEC Nationals are accredited on the NQF for learners aged 16 years and over. Learners aged 15 and under cannot be registered for a BTEC National qualification. There is no upper age limit; more mature learners are welcomed to study for BTEC qualifications.

Hours

Each BTEC National unit consists of 60 guided learning hours. The definition of guided learning hours is 'a notional measure of the substance of a qualification'. It includes an estimate of time that might be allocated to direct teaching, instruction and assessment, together with other structured learning time such as directed assignments or supported individual study. It excludes learner-initiated private study.

A 12-unit BTEC National Certificate programme, therefore, consists of 720 guided learning hours. If studied over two years, this would equate to two thirds of a full time students' timetable. The 18 unit BTEC National Diploma programme would consist of 1080 guided learning hours and comprise the bulk of the timetable of a full time student.

If studied part time, some of the learning would be done in the workplace, with compensatory reduction in the hours required in college.

Content and structure of the qualifications

The BTEC Nationals are accredited as discrete programmes of study. The programmes are as follows:

BTEC National Award

6 units of which 2 form a compulsory common core and 4 are chosen from a list of specialist units.

Content and structure of the qualifications

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BTEC National Award

6 units of which 2 form a common core and 4 are chosen from a list of specialist units.

The accredited combinations comprise:

BTEC National Award in Applied Science (Applied Biology)
BTEC National Award in Applied Science (Applied Chemistry)
BTEC National Award in Applied Science (Applied Physics)
BTEC National Award in Applied Science (Environmental Science)

BTEC National Certificate

12 units of which 5 form a compulsory common core and 7 are chosen from a list of specialist units.

The accredited combinations comprise:

BTEC National Certificate in Applied Science (Laboratory and Industrial Science)
BTEC National Certificate in Applied Science (Forensic Science)
BTEC National Certificate in Applied Science (Medical Science)

BTEC National Diploma

18 units of which 5 form a compulsory common core and 13 are chosen from a list of specialist units.

The accredited combinations comprise:

BTEC National Diploma in Applied Science (Laboratory and Industrial Science)
BTEC National Diploma in Applied Science (Forensic Science)

There are 40 units in total. A full list and the respective combinations for each of the above awards is given in the specification.

The accredited combinations comprise:

BTEC National Award in Media (Radio)
BTEC National Award in Media (Video)
BTEC National Award in Media (Print)
BTEC National Award in Media (Music Production)
BTEC National Award in Media (Digital)

BTEC National Certificate

12 units of which 4 form a compulsory common core, plus 3 compulsory specialist units and 5 optional specialist units chosen from a list of 7 or 9 units depending on the award

The accredited combinations comprise:

BTEC National Certificate (Audio Production)

BTEC National Certificate (Moving Image Production)

BTEC National Certificate (Print Production)

BTEC National Diploma

18 units of which 4 form a compulsory common core, plus 4 compulsory specialist units and 10 optional specialist units chosen from a list of 11/14/16 units depending on the award

The accredited combinations comprise:

BTEC National Diploma (Audio)
BTEC National Diploma (Moving Image)
BTEC National Diploma (Publishing)

There are 50 units in total. A full list and the respective combinations for each of the above awards is given in the specification.

Assessment – procedures, methods and levels

Assessment in BTEC National programmes is unit-based. Units are specified as externally or internally assessed. Assessments, whether external or internal, measure the achievement of defined learning outcomes. A learner achieves a learning outcome by meeting the series of mandatory assessment criteria that are associated with that outcome. The assessment criteria for each unit are set out in the unit specification.

External assessment takes the form of either an Integrated Vocational Assignment (IVA), as is the case for the BTEC Science awards, or a variation on the IVA, the Final Major Project (FMP), as is the case for the BTEC Media awards. The IVAs or FMPs are intended to be taken in the second half of a candidate's final year of study and are designed to cover the full range of grading criteria for the specified units (normally two or three), which will also require candidates to draw on knowledge and skills developed in other specialist units. IVAs are set and marked by Edexcel. FMPs require the submission of a Project Proposal to the external examiner for approval; the FMP is then internally assessed and externally re-marked by the external examiner when s/he visits the centre.

Internal assessment activities are devised and set by the centres, to provide the learners with opportunities to demonstrate achievement of the unit learning outcomes. The tasks/activities set must enable learners to produce evidence that directly relates to the specified outcomes. Edexcel does not prescribe the number or the nature of the activities to be used to assess a particular unit.

Grading

BTEC National units, whether externally or internally assessed, are graded pass, merit or distinction. Mandatory criteria for each of the grades are specified in the unit *Assessment Guidance* grids for the use of Edexcel markers or internal assessors.

The criteria for merit and distinction focus on application of the higher level skills; they define the parameters of the quality that work must have to achieve each of the grades.

The unit grades achieved are aggregated to determine the overall grade for the qualification achieved by each student. This aggregation is achieved by ascribing points to each unit grade as follows:

Internally assessed units

- Pass 2 points
- Merit 4 points
- Distinction 6 points

Externally assessed units

- Pass 4 points
- Merit 8 points
- Distinction 12 points

The rules of combination to convert unit points to the overall qualification are given at the end of Section 4.

QA systems and code of practice

The assessment of BTEC National programmes is subject to External Verification by subject specialist External Verifiers. Centres are expected to have rigorous systems of internal verification to deliver valid assessment instruments and correct assessment judgments. External Verifiers sample assessment instruments and judgements on two occasions during each academic year. Centres judged to have interpreted unit requirements or standards incorrectly will be set action plans for improvement. Final certification will depend on verification that National Standards have been met.

A Code of Practice for Vocationally-Related Qualifications is currently under development by QCA.

SECTION 4: THE WORK OF THE EXPERT GROUP

The Expert Group met on one occasion for two days to examine and discuss the evidence listed in Appendix 2. This section contains an account of the deliberations of this meeting.

The first morning was mainly concerned with the dissemination of information about the comparability study and the qualifications involved. The session included:

- Jill Johnson briefing the Expert Group about the current UCAS Tariff
- Anne Matthews briefing the Group on the Protocol agreed with UCAS for conducting a comparability study
- The AQA Chief Examiners presenting information about the AVCEs in Science and Media, the benchmark awards
- Senior representatives from Edexcel presenting an overview of the new BTEC National Awards, Certificates and Diplomas, the qualifications seeking entry to the UCAS Tariff
- The Edexcel Chief Verifiers presenting additional information about the BTEC Nationals in Applied Science and Media
- The HE representatives presenting information about the appropriateness of the BTEC qualifications for entry to HE from the perspective of admissions tutors.

Comparison of aims

During the course of these presentations, it became clear that there was common ground between the AVCEs and the BTEC Nationals in terms of providing the basis for progression to HE, FE or further training. For example, the AVCEs 'provide students with the essential skills, knowledge and understanding of the sector', developing career opportunities in the relevant sector 'as well as enabling entry to Further and Higher Education programmes'. (AVCE Science Specification 2000, Page 10, Media Specification 2002, Page 11) The BTEC Nationals provide progression routes for further specialist study in a specified area or into Further or Higher Education, for example a BTEC Higher National Certificate or a related degree programme. (BTEC Nationals Applied Science and Media Specifications, 2002)

However, it was noted that the aims of the two sets of awards contained different emphases, reflecting their different purposes and confirming their distinctive characters. Thus, the aims of the BTEC Nationals are concerned with providing specialist work-related qualifications in a range of sectors (e.g. Laboratory and Industrial Science and Forensic Science for Applied Science, Music Production and Publishing for Media,). The aims of the AVCEs are more broadly based and are more concerned with enabling students to gain, respectively, an 'understanding of a wide range of scientific applications' and an 'understanding of the key media production pathways and the application of media communication principles'. Nonetheless, it was agreed that, despite these differences in emphasis, there was a sufficient degree of overlap to justify the comparison of the two sets of awards.

Structure of the awards

The presentations demonstrated that, largely for historical reasons, the structure of both sets of awards is broadly similar. Both the AVCEs and the BTEC Nationals are organised on a unit basis, with different numbers and combinations of units required for the individual awards (see Sections 2 and 3 for details). The AVCEs comprise six and twelve unit awards. The BTEC National Awards have six units, the National Certificates 12 units and the National Diplomas 18 units.

Determining size and demand – comparison of study hours

One measure of the size and demand of an award is the number of hours of study needed to complete it and discussion towards the end of the morning began to address this issue. Each unit in the BTEC Nationals consists of 60 guided learning hours, so the number of hours of study needed to complete a National Award, Certificate and Diploma would be 360, 720 and 1080 respectively. AQA does not specify the number of hours required to complete an AVCE, but in practice it is currently accepted that an AVCE unit required 60 hours of study to complete it successfully. In addition, the Chief Examiners for the AVCE Awards in science and media indicated that the 12 unit AVCE award was typically timetabled to occupy two option blocks, thus taking 40% of available curriculum time. This would in effect amount to about 60 hours to complete each of the AVCE units. Expert Group members therefore agreed that this evidence suggested that the AVCE and BTEC National qualifications would seem to be broadly equivalent in size on the basis of guided learning hours.

Determining size and demand – comparison of content/breadth and depth of coverage

The next step was to develop a methodology to test the judgment reached about the comparability of the size of the two awards using the evidence derived from guided learning time by reference to the content of the two sets of awards. It was agreed that Expert Group members should split into the two subject groups (Science and Media) and that each group should compare two units from one of the BTEC National Certificates with matched AVCE units. Selection of the two pairs of units would be done on the following basis; one pair where a significant amount of overlap in content could be identified, and one pair where less overlap in the content of the BTEC and AVCE units was evident. Each group would consider whether covering the content in each of the chosen pairs of units would require an equivalent amount of study time. It was argued that, if these exercises confirmed that a BTEC unit and an AVCE unit are broadly equivalent in size and demand, it would follow that the two sets of qualifications were broadly equivalent in size and demand.

A summary of the different approaches to this task taken by the Science and Media groups is given below, together with the decisions reached.

The Science Group

The Science Group opted to select units from the BTEC National Certificate in Laboratory and Industrial Science on the grounds that this award was the most popular. The group also decided that the choice of units should be restricted to those with a high theoretical content, rather than those with a process or skills focus, since these would provide a better source of comparable content. Using the content mapping exercise prepared prior to the meeting (see Appendix 3), the group selected two pairs of units for the two comparison exercises described below. It was noted that the two AQA units chosen are both externally examined and marked out of 60.

Using the AQA and BTEC specifications, group members began by comparing the content for each pair of units in order to identify the amount of common content, and the amount of unique content, in each pair. Group members estimated the amount of unique content in each unit as a proportion of the overall content by examining, in the case of the AVCE, the proportion of marks out of 60 being allocated to the unique content, and, in the case of the BTEC unit, the proportion of the grading criteria relating to the unique content. This process depends on the assumption that the learning time needed to cover a particular item of content in each award is equivalent to the proportion of marks/criteria being assigned to that content in each award.

Comparison 1 – Significant overlap of content

AVCE Unit 3 – Controlling Chemical Processes
BTEC National Certificate Unit 14 – Industrial Applications of Chemical Reactions

There was a considerable amount of overlap between these two units. Both are based on how the principles of equilibrium and kinetics influence chemical reactions, and contribute to how such reactions are carried out in the laboratory and on the industrial scale. Unit 14, in addition, considers the contribution of enthalpy changes to chemical reactions and to process design. Some of the AVCE content was not covered in the BTEC unit, including work on the economics of industrial production and calculating chemical quantities, a topic covered in Unit 1 of the BTEC Specification. However, the BTEC Unit had work on the Born-Haber process, pK_w and proton transfer that was not covered in the AVCE unit.

By examining the number of marks on the external assessment that would be allocated to the content in the AVCE unit that was not covered in the BTEC unit, the group agreed that this amounted to about 18-20% of the total content. The work that was unique to the BTEC Unit related to about 1.5 out of 5 of the assessment criteria for the Unit, i.e. approximately 20%. Overall the group felt that the size of these two units was comparable.

Comparison 2 – Little overlap of content

AVCE Unit 4 – Controlling the Transfer of Energy
BTEC National Certificate Unit 11 – Energy Changes, Sources and Applications

Using the same process as above, the group identified some 40-45% of unique content in the AVCE unit. This included work on the Laws of Motion that is covered in Unit

1 of the BTEC qualification, some applications such as the use of U-values in the construction industry and the whole of the section on Controlling Fluid Flow. However, the BTEC unit had a comparable amount of unique content, including work on gases, temperature scales and energy sources. Thus, once again, the group concluded, on the basis of comparing the number of marks being awarded to this unique content on the AVCE external assessment, and the number of assessment criteria associated with the unique content in the BTEC unit, that the size of these two units was comparable.

The Media Group

The Media Group opted to select units from the BTEC National Certificate in Moving Image Production, since this award most commonly had the highest take up. Using the content mapping exercise prepared prior to the meeting (see Appendix 3), the group selected two pairs of units for the two comparison exercises described below.

Using the AQA and BTEC specifications, group members began by comparing the content stated for each pair of units in order to identify the amount of common content and the amount of unique content in each pair.

Comparison 1 – Significant overlap of content

AVCE Unit 1 – Analyse Media products
BTEC National Certificate Unit 1 – Understanding the Media

Each was a compulsory unit in the awards and covered the cornerstone of media understanding. It was noted that the AVCE unit was externally assessed and the BTEC unit internally assessed by portfolio. It was felt that the overlap between these two units was complete, i.e. there was no content unique to each award. Thus, whilst the differences in mode of assessment were noted, members of the expert group agreed that both units required an equivalent volume of work. Each covered all the crucial concepts, and neither unit included additional concepts not found in the other.

Comparison 2 – Little overlap of content

AVCE Unit 8 – Creating Moving Image Products
BTEC National Certificate Unit 28 – Video Editing

Direct comparison of the content of these two units was less straightforward than in the previous exercise. The different natures of the two awards meant that the BTEC unit covered parts of this AVCE unit and parts of Unit 4, Produce a Media Product. The AVCE unit tended to cover a greater breadth of post-production work, while the BTEC unit covered more content in more detail; for example, in preparation techniques, such as tape logging, for editing. The AVCE unit covered all the stages in creating a moving image product (pre-production, production, post-production and evaluation), to be carried out by a team, rather than an individual, and in less depth than was required of an individual in the two processes (post-production and evaluation) covered in the BTEC unit. It was felt that the time spent by an individual in editing and evaluating, in depth, in the BTEC unit was equivalent to the time spent on all four processes in the AVCE. It was agreed that the AVCE unit covered more

content than the BTEC unit and that the BTEC unit covered more depth in a limited range of content.

The fundamental issue was determining equivalence between depth and breadth. Given that the BTEC National Certificate is an in-depth pathway devoted to the moving image, it was to be expected that an individual unit should have a narrower range of content covered in greater detail and depth. The group concluded that, although the two awards had different aims, with the AVCE leading to a general understanding of the production process and the BTEC leading to more specific skills and understanding, the two units were broadly comparable in size, the breadth of one compensating for depth in the other.

Overall, it seemed clear that the core units in the two awards were of directly comparable size and covered the same content, but that the specialist units had different aims, and different content with some overlap, but nonetheless demanded comparable amounts of work from a candidate in terms of the time needed to cover the material in each unit.

Summary of Expert Group views on size and demand of awards

At the end of the afternoon the full Expert Group reconvened and compared notes. While each subject group had adopted distinctly different approaches to the comparison exercises, the Science Group adopting a more formulaic approach and the Media Group a more discursive one, both groups had agreed that the size of the pairs of units they had examined were comparable. The Expert Group, therefore, concluded that the evidence from these exercises supported the evidence from the comparison of study hours, and corroborated their earlier view that the two sets of awards are equivalent in size and demand.

The Expert Group agreed that the main tasks for the following day were to:

- Compare levels of attainment
- Align the grades of the BTEC Nationals with those of the AVCE
- Agree a proposed allocation of UCAS points for the BTEC Nationals

Comparing levels of attainment

The second task in the Protocol involves comparing the levels of attainment of the awards seeking admission to the Tariff with those of the benchmark awards, using the published grading criteria and, where available, candidate evidence and other assessment materials. However, given the recent introduction of the BTEC Nationals, it was appreciated that no candidate evidence would be available. Nonetheless, given the importance of BTEC National qualifications as an entry route to Higher Education, it was agreed that it was important that Tariff Points should be allocated as fairly as possible on the basis of available evidence about assessment, essentially the grading criteria. Candidate evidence would be considered during the automatic review process in the future.

Using the two pairs of units with good content overlap from the previous exercises, plus two other pairs to be chosen by the groups, it was agreed that the two subject

groups should compare the published grading criteria across the two sets of awards. This exercise would determine whether there are any differences in terms of what candidates are expected to know and do, and enable group members to assess the comparability of demand being placed on the candidates and the similarity between the criteria being used to make judgements about candidate performance.

The Science Group

The Science Group began with some general comparisons of the BTEC grading criteria for the Pass, Merit and Distinction grades and the AVCE criteria for Grades E, C and A. The Edexcel Chief Examiner characterised the Pass, Merit and Distinction grades as requiring the demonstration of the 'what', e.g. recall and some guided application of knowledge and principles, the 'how', e.g. the application of knowledge and principles, and the 'why', e.g. the demonstration of the higher order skills of synthesis and evaluation. It was agreed that this was very similar to the requirements for the AVCE Grades E, C and A.

It was agreed that, in the absence of candidate evidence, the group would attempt to construct ideal types of what the grading criteria demanded of candidates at each of the three grades. The two sets of grading criteria used in the following exercises are provided in Tables 1 and 2.

Comparison 1

AVCE Unit 3 – Controlling Chemical Processes
BTEC National Certificate Unit 14 – Industrial Applications of Chemical Reactions

Table 1: Comparison 1 Grading Criteria

AVCE in Science **Unit 3: Controlling Chemical Processes**	**BTEC National Certificate in Applied Science** **Unit 14: Industrial Applications of Chemical Reactions**
To achieve a **GRADE E** you must show that you can: • Apply knowledge and chemical principles from the unit to situations that are familiar • Carry out straightforward calculations • Interpret and explain experimental results • Use basic chemical and industrial terminology • Write chemical equations for straightforward, frequently encountered chemical reactions • Recall knowledge from some parts of the unit and understand some of the fundamental principles and concepts	To achieve a **PASS** grade the evidence must show that the learner is able to: • Give correct definitions for the following: standard enthalpy change, equilibrium process, pH, standard reduction potential, order of reaction, rate of reaction, activation energy • Follow given practical methods safely and accurately to measure the standard molar enthalpy change for a reaction, measure molarities in acid/base and redox systems, determine the order of a reaction • Identify examples of exothermic processes used industrially and show the effect of the enthalpy change on how the processes are operated • Investigate examples of strong and weak acids and show how their strengths influence their uses
To achieve a **GRADE C** you must also show that you can: • Apply knowledge of fundamental principles and concepts to some new situations • Carry out a range of calculations • Interpret, explain and evaluate experimental results • Write chemical equations and use them quantitatively • Recall knowledge from many parts of the unit and understand many of the fundamental principles and concepts	To achieve a **MERIT** grade the evidence must show that the learner is able to: • Calculate the following from experimental data: the standard molar enthalpy change for a reaction, value of K? for given reactions, the pH of buffer solutions, the emf of an electrochemical cell, the rate of a constant reaction • Use examples of industrial processes to show how the concentration of products of reversible reactions may be maximised • Review the use of equilibrium principles in corrosion control or prevention • Evaluate the action of the catalyst within a given process and show how this action facilitates desired course of the reaction
To achieve a **GRADE A** you must also show that you can: • Understand principles by applying them in familiar and new situations from more than one area of the unit • Carry out calculations logically even when given little guidance • Interpret, explain and evaluate experimental data, using	To achieve a **DISTINCTION** grade the evidence must show that the learner is able to: • Evaluate the effects of conditions chosen for a given industrial process • Analyse the reasons why industrial processes are often run under non-equilibrium conditions • Identify sources of error within practical investigations and suggest

appropriate chemical knowledge and terminology • Recall and use knowledge from the whole unit with few significant omissions and show good understanding of principles and concepts	procedures to eliminate errors

The Science Group compared the BTEC Pass grading criteria with the AVCE Grade E criteria. It was agreed that both sets of criteria placed a broadly similar demand on candidates, requiring sound knowledge of chemical processes and principles and the application, with some guidance, of this knowledge in a limited range of circumstances.

The group then moved on to compare the BTEC Merit grading criteria with the AVCE Grade C criteria. Again it was agreed that both sets of criteria placed broadly similar demands on candidates, requiring them to apply the knowledge already demonstrated for the Pass/Grade E in increasingly unfamiliar industrial contexts. Both sets of criteria require the interpretation of more quantitative evidence and the ability to use more complex calculation procedures than the Pass/Grade E.

Finally the group compared the BTEC Distinction grading criteria with the AVCE Grade A criteria. Once again it was agreed that both sets of criteria placed broadly similar demands on candidates, requiring mastery of the Merit/Grade C criteria and the demonstration of higher level skills such as synthesis and evaluation. Candidates for both awards at this level would be given data which they would be required, independently and critically, to evaluate in the context of a range of industrial processes.

In the light of this analysis, group members agreed that the requirements of each set of criteria increased by the same amount from Pass/Grade C to Distinction/Grade A, requiring candidates to analyse increasingly complex quantitative evidence and to demonstrate their knowledge and skills in increasingly diverse contexts. In summary, therefore, the group was satisfied that the demand placed on candidates at each grade for this pair of units was broadly equivalent.

Comparison 2

AVCE Unit 6 – Carrying Out Scientific Investigations
BTEC National Certificate Unit 5 – Scientific Method

Table 2: Comparison 2 Grading Criteria

AVCE in Science **Unit 6: Carrying out Scientific Investigations**	**BTEC National in Applied Science** **Unit 5: Scientific Method**
To achieve a **GRADE E** you must show that you can: • Produce a realistic and achievable plan • Follow specified procedures correctly • Use techniques for observing and measuring correctly • Record and process qualitative and quantitative data accurately in an appropriate format • Identify patterns in data and make connections • Produce a clear report, using basic terminology correctly and relevant information to support your ideas and findings	To achieve a **PASS** grade the evidence must show that the learner is able to: • Use given information and methods to formulate meaningful objectives for the investigation and devise an outline plan • Using given methods carry out your plan to collect information/data correctly, safely and with integrity • Using given methods, process correctly the information and data obtained from your experimental work and from other sources • Present your results and conclusions in an appropriate format, using correct scientific language

To achieve a **GRADE C** you must also show that you can: • Explain how your plan took account of constraints you had to work under • Describe how you adapted and modified procedures/techniques, if this was required • Interpret and use effectively raw and processed qualitative and quantitative data • Describe how well your outcomes met the objectives of the investigation • Produce a logical and well-constructed report using scientific terminology correctly and showing that you understand the scientific ideas that underpin the investigation	To achieve a **MERIT** grade the evidence must show that the learner is able to: • Analyse the problem, research possible methods and present a detailed plan of the investigation based on clear objectives • Carry out your selected methods, recording relevant information/data at appropriate intervals with the required accuracy and precision in accordance with your plan • Draw valid conclusions from your independent evaluation and analysis of the information and data obtained • Show clearly how your investigation was based on the application of scientific principles
To achieve a **GRADE A** you must also show that you can: • Explain why the strategies and approaches you planned and used, or attempted to use, to overcome constraints in procedures or techniques enabled you to obtain evidence • Describe how you anticipated problems that might arise and implemented contingency plans to ensure you met the given timescale • Justify changes in your plans and procedures • Evaluate qualitative and quantitative data critically, drawing meaningful and valid conclusions • Suggest improvements to the investigation as you carry it out and when you have completed it • Use scientific terminology fluently and show a high level of scientific knowledge relevant to the investigation	To achieve a **DISTINCTION** grade the evidence must show that the learner is able to: • Carry out an analysis of the problem to be addressed and present a detailed plan of the investigation which specifies clearly the objectives • Carry out your plan, reviewing progress at each stage and repeating measurements or revising the method as appropriate to provide the required accurate and precise information and/or data • Validate the methods used and the results obtained, showing clearly the extent to which your objectives were met and how your investigation addressed the underlying scientific principles

On examination of the grading criteria for Pass/Grade E, Merit/Grade C and Distinction/Grade A, it was clear to all group members that both sets of criteria demanded very similar levels of performance. As in the previous exercise, each set of grades increased the level of performance required by the same amount, with each grade building upon and requiring a sound grasp of the skills and knowledge required for the previous one.

So, for example, candidates at Pass/Grade E are required to plan and carry out an investigation, using appropriate techniques and procedures correctly, utilising qualitative and quantitative data and presenting results and conclusions using correct scientific terminology. Candidates who present insufficient evidence for this grade will not be able to achieve the criteria for the subsequent grade. At Merit/Grade C, candidates are required to include in their report a description of how the plan took account of constraints and how data were processed and interpreted, and the conclusions drawn, explaining how well they met the objectives and to demonstrate their understanding of the scientific principles underpinning the investigation. At Distinction/Grade A, candidates are required to provide further analysis and evaluation of the strategies and approaches used, how problems were anticipated and contingency plans developed, and how changes and improvements were made during the course of the investigation.

A final check on the comparability of demand of these two sets of grading criteria was carried out using AQA Portfolio Standardising Material for Unit 6 (see Appendix 3). The Edexcel Chief Verifier and the HE representative assessed this piece of candidate work first against the grading criteria for Unit 6 and then against the BTEC grading criteria. They both agreed that a number of the criteria for Grade A were not demonstrated, e.g. there was insufficient evidence of anticipating problems, contingency planning and why changes in plans had been made during the course of

the investigation. In their view, therefore, this piece of work would be awarded a Grade C. The AQA Chief Examiner agreed with this judgement. Applying the BTEC criteria revealed a similar insufficiency of evidence to demonstrate how progress had been reviewed and changes made at each stage of the investigation. The Edexcel Chief Verifier's view, therefore, was that this piece of work would be awarded a Merit.

Having examined the level of attainment required by the grading criteria for two pairs of units, and having applied the two sets of criteria for the second pair of units to a piece of AVCE candidate evidence, the group felt able confidently to conclude that, at the level of a unit, the standards of assessment for the two sets of awards at each of the Pass/Grade E, Merit/Grade C and Distinction/Grade A are comparable.

Media Group

The two sets of grading criteria used in these exercises are provided in Tables 3 and 4.

Comparison 1

AVCE Unit 1 – Analyse Media products
BTEC National Certificate Unit 1 – Understanding the Media

Table 3: Comparison 1 Grading Criteria

AVCE in Media **Unit 1: Analyse Media Products**	**BTEC National Certificate in Media** **Unit 1: Understanding the Media**
To achieve a **GRADE E** you must show that you can: • Describe, in general terms, elements of texts showing you know why/how they are used in media texts • Describe clearly representation issues in media texts • Recognise and be able to describe genre and its uses • Explain accurately the principles of narrative structure • Use technical language accurately to analyse media texts critically	To achieve a **PASS** grade the evidence must show that the learner is able to: • Demonstrate an understanding of how meaning is created and how audiences might read texts, using basic terminology and with reference to examples • Identify generic conventions and themes and show how they develop over time • Demonstrate an understanding of the functions of genre, using basic terminology • Identify types and elements of mainstream and alternative narrative structures • Identify issues of representation and show an understanding of legal and ethical considerations • Identify ways in which access to and control of the media affect representation
To achieve a **GRADE C** you must also show that you can: • Select independently and use relevant examples and research to aid investigations and analysis • Apply skills of media analysis to show you clearly understand and can explain how meaning is created in media text, drawing on: o clear explanations of the elements of text o a sound and detailed understanding of either representation, genre or narrative structure • Use media terminology accurately	To achieve a **MERIT** grade the evidence must show that the learner is able to: • Demonstrate a clear understanding of how meaning is created and how audiences might read texts, using subject terminology and with detailed discussion of examples • Discuss in detail generic conventions and themes and the ways in which they develop over time • Demonstrate a clear understanding of the functions of genre, using subject terminology appropriately • Discuss in detail types and elements of mainstream and alternative narrative structures • Discuss in detail issues of representation and show a clear understanding of legal and ethical considerations • Discuss in detail ways in which access to and control of the media affect representation
To achieve a **GRADE A** you must also show that you can: • Give a sophisticated and personal response to analysing media texts that is appropriate and justified	To achieve a **DISTINCTION** grade the evidence must show that the learner is able to: • Demonstrate a sophisticated understanding of how meaning is created and how audiences might read texts, using subject terminology fluently and with fully justified analysis of examples

• Recognise the limitations of analytical tools in your in-depth analysis of representation, genre or narrative structure • Give a coherent account of how meaning is created through highly effective and fluent use of media concepts and terminology	• Analyse generic conventions and themes and the ways in which they develop over time with full justification of ideas • Demonstrate a sophisticated understanding of the functions of genre, using subject terminology fluently and with full justification of ideas • Analyse types and elements of mainstream and alternative narrative structures with full justification of ideas • Analyse issues of representation with full justification of ideas and show sophisticated understanding of legal and ethical considerations • Analyse ways in which access to and control of the media affect representation with full justification of ideas

In general, the group felt that the wording of the BTEC grading criteria made it easier to distinguish the different levels of performance required at Pass, Merit and Distinction than the wording of the AVCE Grade E, C and A criteria. However, group members were referred to additional information in the *Essential Information for Teachers* section of the Specification which helped to clarify the requirements for the AVCE. The group was then able to agree that both sets of criteria demanded similar levels of performance.

So, for example, at Pass/Grade E candidates have to demonstrate a basic understanding and knowledge of media texts, genre and narrative structure through identification or description. They have to use appropriate media terminology when reporting on their understanding and knowledge of media theory. At this grade candidates should have identified and described in a manner that indicates a basic and general understanding of media theory. At Merit/Grade C candidates are required to demonstrate clearly their understanding and knowledge through their discussion of relevant issues and an application of appropriate language. At this grade candidates will be showing a more coherent approach to their investigations linked to their developing media language. At Distinction/Grade A, candidates are required to develop a sophisticated response whilst demonstrating a comprehensive understanding of texts, genre and narrative structure. At this grade candidates will be able to analyse issues and comment on their use in the media in a sophisticated manner.

Comparison 2

AVCE Unit 3 – Research for Media Production
BTEC National Certificate Unit 2 – Research Techniques

Table 4: Comparison 2 Grading Criteria

AVCE in Media **Unit 3: Research for Media Production**	**BTEC National Certificate in Media** **Unit 2: Research Techniques**
To achieve a **GRADE E** you must show that you can: • Develop and research feasible ideas to clarify the aims of the work, and describe how it might be made • Select sources of information, resources and research methods • Identify potential constraints (laws and regulations) • Use media terminology appropriately	To achieve a **PASS** grade the evidence must show that the learner is able to: • Demonstrate understanding of how to carry out primary and secondary research under direction using easily found sources and limited procedures • Demonstrate basic knowledge of market intelligence techniques and appropriate regulations • Present research findings using basic techniques • Demonstrate understanding of information trails and bibliographies with reference to media outcomes and with awareness of copyright issues

To achieve a **GRADE C** you must also show that you can: • Work with limited guidance only in your approach to your research and selection and use of appropriate evidence from a range of sources • Give a coherent explanation of the strength and weaknesses of the research and its validity • Give a full explanation of the potential constraints on the production of the idea	To achieve a **MERIT** grade the evidence must show that the learner is able to: • Pursue thoughtfully primary and secondary research under personal motivation using less obvious sources and a range of procedures • Discuss in detail market intelligence techniques showing relevance of regulations • Discuss in detail research findings using a variety of presentational techniques • Produce well referenced information trails and bibliographies clearly related to media outcomes and with details of relevant copyright issues
To achieve a **GRADE A** you must also show that you can: • Produce an innovative, creative and realisable approach to an idea, drawing on a variety of relevant sources that are independently obtained • Demonstrate a purposeful and consistent application of skills and knowledge when developing the idea and the proposal	To achieve a **DISTINCTION** grade the evidence must show that the learner is able to: • Execute with a highly focused sense of purpose primary and secondary research independently using all available sources and a full range of procedures • Analyse market intelligence techniques showing good understanding of how regulations affect marketing decisions and outcomes • Analyse research findings using imaginative and effective presentational techniques and with justification of all points made • Produce fully referenced information trails and bibliographies with critical evaluation of their relevance to media outcomes and with full recognition of implications of copyright issues

The group chose a second pair of units in which where there was good overlap of content. The group found that the levels of attainment demanded were similar at each of the three grade points. It was noted that the language used was different at Grade E/Pass and, most importantly, that there was a different emphasis in the two sets of criteria. Although similar knowledge and skills were being assessed there was more of a reflective element in Grade C and more of an emphasis on creativity at Grade A which were not explicit in the BTEC criteria which demanded a clear and analytical approach to research. The AVCE unit was internally assessed and the BTEC unit externally assessed and the group agreed that the differences in emphases were to be expected given the different natures of the awards and, in this instance, the different modes of assessment.

Summary of Expert Group views on levels of attainment

Following these exercises, the full Expert Group reconvened and compared notes. While each subject group had adopted a different approach, the Science Group electing to construct ideal types of the grading criteria demanded of candidates at each of the three grades and the Media Group opting for direct comparisons of the requirements of the criteria, both groups had agreed that the levels of attainment were comparable **at the unit level**.

Comparison of assessment modes

Both sets of awards are assessed through the compilation of portfolios of evidence, which are internally assessed and externally moderated, and through external assessment. There are, however, certain differences between the two sets of awards in the methods of external assessment.

For all AVCEs, a minimum of one third of all units must normally be externally assessed. External assessment is through externally set papers, normally two hours, comprising, for Science, both short answer and more extended questions, and, for Media, open questions. (See Section 2 for details)

For the BTEC Nationals, external assessment takes the form of either an Integrated Vocational Assignment (IVA), as is the case for the BTEC Science awards, or a variation on the IVA, the Final Major Project (FMP), as is the case for the BTEC Media awards. The IVAs or FMPs are intended to be taken in the second half of a candidate's final year of study and are designed to cover the full range of grading criteria for the specified units (normally two or three), which will also require candidates to draw on knowledge and skills developed in other specialist units. IVAs are set and marked by Edexcel. FMPs require the submission of a Project Proposal to the external examiner for approval; the FMP is then internally assessed and externally re-marked by the external examiner when s/he visits the centre.

However, the Expert Group was satisfied that these differences in methods of external assessment did not affect their earlier judgment, based on the evidence of the comparison of levels of attainment using the grading criteria, that the demands made on candidates and the standard of assessment is comparable across both sets of awards **at the unit level**.

Aligning the grades

The Expert Group had agreed that at the unit level a BTEC Pass aligns with an AVCE Grade E, a Merit with Grade C and a Distinction with Grade A. However, a major difficulty now emerged as a result of a modelling exercise that compared the outcomes of combining different unit scores to achieve overall qualification grades. In both sets of awards the grade for the award is derived from the unit grades via an allocation of points to each grade as shown in Table 5.

Table 5: Unit grade points

AVCE	Unit grade	Points	BTEC	Unit grade	Points
	A	19-24		D	6
	B	16-18			
	C	13-15		M	4
	D	10-12			
	E	7-9		P	2
	U	0-6			

A simple addition of the points awarded to each unit then gives the grades for the award, as shown in Table 6 for a six unit award (AVCE, BTEC National Award):

Table 6: Calculation of overall qualification grades

AVCE	Total points	Qualification grade	BTEC	Total points	Qualification grade
	114-144	A		28-36	D
	96-113	B			
	78-95	C		20-26	M
	60-77	D			
	42-59	E		12-18	P
	0-41	U			

The rationales for the different grading systems were discussed and the following points were noted:

- the BTEC qualifications are graded on a three point scale (D, M and P), the AVCEs use a five point, A – E, scale (see Table 5)
- there is a range of points available for each unit grade in the AVCEs, the BTEC qualifications use a threshold approach to achievement at the unit level and so do not have a range of points at each unit grade (see Table 6)
- In the AVCEs the points range for the qualification grades are multiples of 6 (the number of units); there is no uniform algorithm applied in the BTEC Nationals where there is a range of points for the qualification grades.

The Group was presented with a number of examples of possible results as follows:

Example 1

A candidate achieving at the low end of the top three grade boundaries - ABCABC in AVCE, is awarded a B (a mid-point or average of the grades achieved), DMMDMM in BTEC is awarded a D (the best grade achieved)

Unit	**AVCE**	**AVCE**	**BTEC**	**BTEC**
	Grade	Points	Grade	Points
1	A	19	D	6
2	B	16	M	4
3	C	13	M	4
4	A	19	D	6
5	B	16	M	4
6	C	13	M	4
Overall	B	96	D	28

Example 2

A candidate achieving at the top end of C and D grade boundaries - CDCDCD in AVCE, is awarded a C (a mid-point or average of the grades achieved), MPMPMP in BTEC is awarded a P (the worst grade achieved)

Unit	**AVCE**	**AVCE**	**BTEC**	**BTEC**
	Grade	Points	Grade	Points
1	C	15	M	4
2	D	12	P	2
3	C	15	M	4
4	D	12	P	2
5	C	15	M	4
6	D	12	P	2
Overall	C	81	P	18

Example 3

A candidate achieving CCCCEE in AVCE, is awarded a D (a mid-point or average of the grades achieved), M (double unit) MMPP in BTEC is awarded a M (the best grade achieved)

Unit	AVCE	AVCE	BTEC	BTEC
	Grade	Points	Grade	Points
1	C	14	M	8
2	C	15		
3	C	13	M	4
4	C	13	M	4
5	E	8	P	2
6	E	7	P	2
Overall	D	70	M	20

Example 1 gave rise to some concern that, in the BTEC qualifications, a Distinction could be awarded for 28 points which could be gained by a candidate achieving two Distinctions and four Merits over the six units.

It had therefore become clear that the different approaches to awarding grades and different rules of combination could lead to qualification grades that were not comparable. Two possible solutions were suggested at the meeting:

- awarding tariff points to the BTEC units, not to the qualification
- changing the rules of combination for the BTEC awards

With regard to this latter point, it was suggested that the total points score range for Distinction might be fairer if set at 30-36 and that the total points score range for Merit might be fairer if set at 18-28. Table 7 sets out this rule of combination.

Table 7: A suggested rule of combination

BTEC	Total points	Qualification grade
	30-36	D
	18-28	M
	12-16	P

This would 'solve' the anomalies in Examples 1 and 2 above. It brings the Distinction and Pass grades more into line with the A and E grades but extends the Merit grade to cover a larger range. Table 8 shows a comparison between the current and suggested rules of combination with the shaded rows indicating changes.

Table 8: A comparison of unit grades to qualification grades

		Qualification grade	
	Total points	**Current**	**Suggested**
DDDDDD	36	D	D
DDDDDM	34	D	D
DDDDMM	32	D	D
DDDMMM	30	D	D
DDMMMM	28	D	M
DMMMMM	26	M	M
MMMMMM	24	M	M
MMMMMP	22	M	M
MMMMPP	20	M	M
MMMPPP	18	P	M
MMPPPP	16	P	P
MPPPPP	14	P	P
PPPPPP	12	P	P
DDDDDP	32	D	D
DDDDPP	28	D	M
DDDPPP	24	M	M
DDPPPP	20	M	M
DPPPPP	16	P	P
DDDDMP	30	D	D
DDDMMP	28	D	M
DDMMMP	26	M	M
DMMMMP	24	M	M
DDDMPP	26	M	M
DDMPPP	22	M	M
DMPPPP	18	P	M
DDMMPP	24	M	M
DMMMPP	22	M	M
DMMPPP	20	M	M

However, neither of these possibilities was felt to be acceptable at the time of the first meeting. Consequently, the meeting was then adjourned to allow the BTEC representatives to review their procedures and to report back to the Expert Group via the Oxford Team.

Review Meeting

The Review Meeting was attended by:

Geoff Hayward, OUDES
Anne Matthews, OUDES
Jill Lanning, BTEC
Michael Hewing, BTEC

Prior to the meeting the BTEC representatives had reviewed their procedures and modelled a number of different approaches to their awarding procedures:

1. The BTEC National student profile was converted to the AVCE profile assuming that Pass, Merit and Distinction performance would translate into a more varied profile in an AVCE student, i.e. including some B and D achievement

2. Conversely hypothetical interim grades were introduced awarding grades for units between Pass and Merit and between Merit and Distinction which would attract 3 and 5 points in the calculation of the overall grade

3. Converting AVCE unit grades and associated marks using mid-points of the marks available for the AVCE grade

4. Converting to AVCE unit grades and associated marks using the lowest and highest marks available

5. Given that the BTEC Nationals have a threshold approach to achievement, i.e. that all defined criteria have to be met in order to achieve a particular grade, the student profile was converted to the AVCE profile using the lowest marks available for A, C and E only

6. Work was done to model the use of different grade boundaries in the BTEC Nationals

7. Unit Tariff Points were allocated to unit achievement and then totalled to review the comparability to the points allocated to the AVCE qualification achievement.

The BTEC representatives had concluded that, given the current grading schemes for the BTEC and AVCE awards, there were no steps that could be taken to guarantee alignment with the AVCE in every individual student profile. They expressed the view that the AVCE points conversion discussed at the Expert Group meeting were not used in practice. They argued that it was not feasible to seek comparability in the calculation of the overall grade.

It was, however, agreed that the comparability of the grades awarded for each unit should provide a compelling argument for recommending comparability of grades at the level of the qualification; that is, if Grade A and Distinction are comparable in each unit then they must be comparable in the qualification, similarly for Grade C and Merit and for Grade E and Pass. Given that this argument holds, then a Distinction in the BTEC National Award (six units) would yield 120 Tariff Points, a Merit 80 Tariff Points and a Pass 40 Tariff Points.

It was not possible to resolve the matter at this meeting and the Oxford team agreed to consider the issues further.

Further thoughts

It is clear that the argument for allocating Tariff Points set out above only holds if the manner in which the qualification grades are arrived at is at least similar in the two awards. Given that the AVCE employs a simple multiplication by 6, it would be necessary to require Edexcel to adopt a similar approach, i.e. to multiply unit points by 6 to get qualification points ranges. This would mean (hypothetically) assigning a range of points to unit grades D, M and P, e.g.

D 5-6
M 3-4.9
P 2-2.9

giving a qualification grade range of

D	30-36	=	30-36
M	18-29.4	=	18-28
P	8-17.4	=	12-16

This is the same as the suggestion made at the Expert Group meeting and the results of using it are illustrated in the shaded parts of Table 8. If the points ranges for the qualification are left in their current form we have the case (Example 1) of a candidate with four Ms and two Ds achieving a D overall and getting 120 Tariff Points.

Alternative ways forward

The Oxford Team identified four possible solutions to the problems of grading and combination discussed above:

1. We accept that, at the moment, there is little that can be done about the sorts of anomalies highlighted in Exercises 1, 2 and 3 above. If we move forward on the basis of aligning Distinction with Grade A, Merit with Grade C and Pass with Grade E at the level of the qualification, because they are aligned at the level of the Unit, then the only solution is to inform Higher Education admissions tutors that such anomalies can occur and urge them to look closely at grades awarded to individual BTEC units in making their decisions about entry. This seems, however, to fly in the face of the logic of the tariff – conveying useful information about the value of a qualification as simply and unequivocally as possible.

2. We ask UCAS to consider the possibility of awarding Tariff Points on a unit by unit basis for the BTEC qualifications. This would undoubtedly cause administrative problems for both UCAS and Edexcel in reporting unit grades, entering them into the necessary systems and then computing the final allocation of Tariff points. Furthermore, it would also mean that students with the same overall grade for their qualification (Distinction, Merit, Pass) determined by the BTEC rules of combination could receive different numbers of Tariff Points.

3. We follow the advice given above and ask Edexcel to alter the grading and combination processes for their awards. This would undoubtedly remove the worst of the anomalies but would mean, we suspect, both going back to the QCA to receive permission to do this and difficulties with centres where courses are already under way.

4. A variant of 2 and 3 would be to allocate Tariff Points on the basis of the scores used to allocate the final BTEC grade for the awards. For example, students getting 30 – 36 points in the National Award would be given 120 Tariff Points, those getting 24 to 30 would be given, say, 80 points and so on. We would need to undertake some modelling to explore how such a system would work in detail. Again, however, this would lead to students with the same overall grade receiving

different numbers of Tariff Points. However, it would achieve the desired outcome of communicating more clearly to Higher Education admission tutors the attainment of BTEC students relative to the achievement of their peers taking AVCE and GCE A Levels.

At this point we felt that we could make no more progress with this issue and asked the Expert Group, especially colleagues from Higher Education, for their comments.

We received a variety of replies offering support for one or more of the four options listed above, and a variety of reasons why we should not proceed with some of them. These responses were considered together with the report by the UCAS Tariff Reference Group on February 21st 2003. As a result of this meeting, it was decided to recommend to the UCAS Board that we should proceed with Option 1 above, with the proviso that an explanation of the problems associated with the process of aggregating units to produce an overall grade for a qualification should also be made available.

Additional evidence

The HE representatives, David Povey, Science, Surrey University, and Lizzie Thynne, Media, Sussex University, had canvassed the views of both their respective admissions tutors and those of colleagues in some other universities with regard to the potential of the BTEC Nationals for university entrance. It was apparent that, where demand exceeds supply, admissions tutors continue to make offers based on GCE A Level grades because 'we know what A Levels mean'. In addition, there are examples of offers of Merit overall being revised to Distinction overall, reflecting the fact that there is still some concern, particularly in the 'old' university sector, that the BTEC qualifications may not prepare candidates sufficiently for the types of degrees on offer.

Nevertheless, in certain subject areas, e.g. some science and engineering based courses, particularly in the post 1992 universities, the former BTEC Diploma qualifications, have begun to gain acceptance as an entry qualification. Much depends on the vocational/academic mix of the degree programme; for example, some 70% of applicants to Thames Valley University's BA in Music Technology have the relevant BTEC Diploma which is known to provide the requisite knowledge and skills, whereas an Engineering degree may require a BTEC Distinction in Mathematics and a science subject, with an overall average of a Merit. Some degree courses will consider a BTEC qualification in a subject related area on an individual basis.

Both HE representatives believed that the new BTEC Nationals, with clear content specifications and a more rigorous assessment regime than before, were now well positioned to enable successful students to progress to HE. It would, however, be important that relevant bodies, including UCAS, communicated the potential of the BTEC Nationals to the academic community in general and to admissions tutors in particular. An essential element in such a communication strategy would be to develop an understanding of the relative strengths of the BTEC Nationals vis à vis AVCEs, GNVQs and GCE A Levels.

APPENDIX 1

CURRICULA VITAE

Edexcel Chief Verifier for Science	Henry Elliott
Edexcel Chief Verifier for Media	Philip Holmes
AQA Chief Examiner for Science	Stewart Chenery
AQA Chief Examiner for Media	Peter Wall
HE Representative for Science	David Powey
HE Representative for Media	Lizzie Thynne
Expert Group Facilitators	Anne Matthews
	Jennifer Tuson

HENRY ELLIOTT

CURRICULUM VITAE

PERSONAL DETAILS

ADDRESS **21, WOOLLEY AVENUE, POYNTON, CHESHIRE, SK12 XU**
TEL/FAX **01625 873580**
Email **henry.elliott@lineone.net**

QUALIFICATIONS

Academic

BSc, PhD	Chemistry, University of Hull, 1962, 1965
PGCE	University of Wales, 1973

Professional

CChem, FRSC	Royal Society of Chemistry, 1984
ARPS	Royal Photographic Society, 1993
D32/33/34/35	BTEC, 1992 - 95

FULL-TIME EMPLOYMENT

Unilever Research Laboratory	1965 - 67	Research chemist
West Cheshire Central College of FE	1967 - 69	Lecturer in chemistry
Polytechnic of Wales	1970 - 80	Lecturer / senior lecturer in chemistry
Stockport College of FHE	1980 - 97	Head of Science
Edexcel Foundation - Qualifications Development Department	1998 - 98	Subject Leader for Science (4 months - maternity cover)

PORTFOLIO OF RECENT PART-TIME CONTRACTS

Edexcel Foundation

1991 -	External Verifier for National, Higher National, GNVQ and NVQ programmes in science
1995 -	Lead Verifier for Science
1998 - 2000	Manager of the following qualification development projects GNVQ Intermediate Science GNVQ Advanced Science HNC Applied Biology HNC Applied Chemistry

Edexcel (continued)	1998 -	INSET Trainer
	2000 -	Adviser to the Oman Government
	2000 -	Chief Moderator for GNVQ/VCE Science
	2001 -	Consultant for the development of the BTEC Nationals in Applied Science
	2001 -	Consultant for the development of GCSE Applied Science
	2002 -	Chief Verifier for BTEC Nationals in Science
	2002-	Chief Examiner for GCSE Applied Science
Qualifications and Curriculum Authority		
	1997 - 1999	Consultant unit writer for GNVQ Science
	2000	Consultant for the development of 'Confirming Standards' in Science
Manchester TEC	1997 - 2000	Training Associate and Internal Verifier for TDLB programmes
Centra	1997 -	Staff Development Associate (Curriculum 2000, GNVQ/VCE Science, NVQs, Key Skills)
FEDA/LSDA	1999 -	Development Consultant (Vocational Learning Support Programme)
Unesco	1999	Science adviser to the Libyan Government
Dental Laboratories Association		
	2000 -	Adviser and trainer for 'Training the Trainers'
Bakery Training Council	2001	Adviser on Strand 1 Technical Certificate development project
British Textile Technology Council		
	2001	Adviser on Strand 1 Technical Certificate development project

Personal details

Name : Philip Michael Holmes
Address: 69 Holyrood Close
Spondon
Derby
DE21 7QB

D.O.B. 01.08.50

Qualifications :

Diploma in Creative Photography Trent Polytechnic

Stage 1 730 Teaching Certificate

Certificate in Education (F.E & H.E) Derbys College of H.E.

Masters Degree in Education (Action Research) Nottingham Trent University

D35

Relevant Experience :

Lecturer in F.E: South East Derbyshire College

Photography
Video / Radio Production
Film Making
Communications
Media Studies
Life Skills / Key Skills

at many levels : TVEI, School Links, GNVQ , National Diploma, Higher National Certificate, NEMAP

Subject Mentor : Certificate in Education (FE/HE) Nottingham Trent University

Tutor Support : Member of college Tutor Support Group (addressing issues of student and staff support in assessment and achievement)

Special projects : Training courses for staff working with SLD students developing alternative achievement recording techniques

Positions of responsibility :

Media Co-ordinator - South East Derbyshire College
Media Manager - South East Derbyshire College
Team Leader Media - South East Derbyshire College

Professional Media :

1978 / 80 Cameraman / Assistant - BBC news and features

1980 / 85 Director / Producer - Rolls Royce plc, Derby

1985 / 87 Freelance Photographer

1994 on Director / Producer - corporate and training programmes for PMH Productions

2001 on Mediateachers.com - developed and manage support site for media teachers and lecturers

Development Activities :

1993 / 4	Mandatory unit revision (East Midlands group) Unit writer GNVQ Media :Communication and Production
1995/6	Option Unit Writer RSA Advanced and Intermediate GNVQ Media : Communication and Production
1995/6	Author : Longmans GNVQ Media : Communication and Production Advanced level text book
1997	Consultant for Pre- Evaluation report NCVQ GNVQ Media : Communication and Production
1997	Option Unit Writer RSA Advanced and Intermediate Re-specification of GNVQ Art & Design
1995 on	EMFEC / ACER / CENTRA / BFI / FEDA Media Sector Update Workshops - Lead Consultant
1997 / 8	QCA Lead Consultant for the re-specification of GNVQ Media : Communication and Production
1997 - on	External Verifier - Media OCR
1998	QCA Media Scrutiny Team member
1998	Product Development Associate : Edexcel Foundation GNVQ Media : Communication & Production Intermediate and Advanced Optional Units

1998	Writer / Editor for National Diploma in Media Production units for Edexcel Foundation
1999	Writer for support material : National Diploma / GNVQ Media Intermediate & Advanced
1999	Trainer : Edexcel Foundation
2001	Writer/ Editor for Higher National Diploma in Media
2001 – on	Chief / Principal Examiner – AVCE / GNVQ Media Edexcel Foundation
2002 – on	Chief Verifier – Media & Performing Arts Edexcel Foundation

CURRICULUM VITAE

NAME Stewart Bernard Chenery

ADDRESS The Chestnuts
Hestley Green
Thorndon
Eye
IP23 7LR

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07860 165924

EMAIL stewart@hestleygreen.freeserve.co.uk

EDUCATION

1958-1962	Stowmarket Secondary Modern School, Suffolk.
1962-1966	Ipswich Civic College, Suffolk.
1966-1969	Hatfield Polytechnic, Herts.
1975-1976	Keswick Hall College of Education, Norfolk.

QUALIFICATIONS

1964 'O' levels -	English Language, English Literature, Geography, Physics, Chemistry, Mathematics.
1966 'A' levels -	Chemistry, Pure Mathematics.
1969 BSc.	Applied Chemistry.
1976	Post Graduate Certificate of Education.

SUBJECTS TAUGHT

Science all abilities
Advanced level Chemistry
GNVQ Science
GNVQ Health and Social Care
Units of GNVQ Art
Key Skills
Various other vocational programmes

EMPLOYMENT

1969-1975	Medical Representative with responsibility for training (The Wellcome Foundation Ltd.)
1976	Thurston Upper School
1976-1978	Teacher of Chemistry
1978-1982	Assistant Director of Studies with particular responsibility for internal and external examinations.
1982-1992	Deputy Head of Sixth Form.
1986	Co-ordinator of vocational programmes.
1988-1992	Head of Chemistry.

1992-1995	Project Director for the Schools' Technology Initiative and Director of Vocational Education 14-18. (SMT)
1995-2000	Director of Vocational Education. / Curriculum Manager. Line Manager for Technology and ICT (SMT)

PRESENT POST

2000-	Colbayns High School SMT Curriculum / Post 16 Adviser (part time)

COMMITTEES WITHIN SCHOOL

Post 16 Standing committee
Curriculum and Assessment
Community
School Council
Member of the Senior Management Team
ICT Working Group

FURTHER QUALIFICATIONS

1994	TDLB D34 verifier award.
1995	TDLB D32/33 assessor award.
1998-99	TDLB D35 External Verifier award

PUBLICATIONS

1994-95	The management of GNVQ for the Secondary Heads Association.
1998-99	Materials for new model GNVQ/AVCE
Jan 2002	AQA specification for GCSE Applied Science
May 2002	AQA scheme of work for GCSE Applied Science
Oct 2002	GCSE Applied Science (Student text) Pub. Hodder & Stoughton
Dec 2002	GCSE Applied Science (Teachers guide) Pub. Hodder & Stoughton

OTHER POSTS HELD WITHIN EDUCATION

1977-1986	Member of the East Anglian Examinations Board Science Panel. Moderator for CSE science examinations.
1986-1995	Chief Moderator for GCSE science examinations ULEAC.
1989-1992	Moderator for City & Guilds vocational programmes.
1978-1992	Adult Education Lecturer.
1997-2001	External verifier for City and Guilds GNVQ courses
1998-2001	Subject lead verifier for City and Guilds GNVQ Science courses.
1999-	Chair of examiners for AQA new model GNVQ Intermediate / Foundation Science examinations.
1999-	Chair of examiners for AQA new model AVCE Science examinations.
2002-	Chair of examiners for AQA GCSE Applied Science examinations.

2002-	Project Manager for 'Excellence Challenge'- The Clacton and Harwich Education Action Zone.
2002-	Project Manager for 'Excellence Challenge'- The South East England Virtual Education Action Zone.
2002-	Consultant for 'Children into University' – The Four Counties University Group

RECENT COURSES ATTENDED AND PRESENTED

- The majority of courses organised by the LEA concerning post-16 and vocational education.
- QCA conferences concerning Key Stage 4 curriculum - some as a speaker to conference.
- QCA Part One conferences
- LEA Curriculum inset
- Acer Part One inset
- In house ICT training
- The organisation, assessment and grading of GNVQ, AVCE and applied GCSE programmes - various organisers including ACER, FEDA, LSDA and awarding bodies.
- Keynote presenter at national inset courses concerning the introduction of new science GNVQ courses.
- Most AQA annual standardisation inset/support courses for teachers for GNVQ and AVCE science.
- Most AQA launch meetings for GCSE Applied science.
- Most AQA annual standardisation inset/support courses for teachers for GNVQ and AVCE science.
- Inset for a number of schools and LEA's.

LEA AND NATIONAL COMMITTEES

- Consultative committee on vocational education.
- Technology schools' initiative network.
- School liaison network with Anglia Polytechnic University establishing compacting arrangements.
- GNVQ Part One network.
- National Post -16 network.
- QCA Science GNVQ consultative group.
- QCA Applied Science development group.
- QCA AVCE redevelopment group

Pete Wall

Pete Wall has taught for almost 30 years in FE and has taught Media Studies at all levels from GCSE to undergraduate. He is the author of ***Media Studies for GCSE*** and the accompanying Teachers' Pack, published by Collins. He is also the co-author of ***Media Studies: The Essential Introduction and Communication Studies: The Essential Introduction***, both of which were published by Routledge this year. He is Chair of Examiners for AQA Media Studies and Communications Studies. He also acts as Chief Examiner for AQA GCSE Media Studies, AVCE Media and GNVQ Media.

David Christopher Povey

Personal Data

Addresses:	Work address Department of Chemistry University of Surrey Guildford GU2 7XH Tel. 01483 689582	Home address 40 Avondale Road Fleet Hampshire GU51 3LG Tel. 01252 624353
E-mail:	d.povey@surrey.ac.uk	
Date of Birth:	23 December 1946	
Status	Married, one son.	

Qualifications:

1965-1968	University of Surrey: BSc (Hons) Chemistry IIb
1968-1969	University of Surrey:MSc Crystallography
1969-1974	University of Surrey:PhD (Title of Thesis- The Crystallography of benzo[b]indeno-[1,2-e]pyran).
1988	CChem MRSC

Employment:

1971-1981	Experimental Officer, Department of Chemical Physics, University of Surrey
1981-1992	Lecturer in Chemistry, Department of Chemistry, University of Surrey
1992-2000	Senior Lecturer in Computer-Aided Chemistry, Department of Chemistry
2000	Promoted to top of extended senior lecturer scale

Teaching Duties

During my career at Surrey, I was first responsible for integrating a range of computing and mathematics courses into a very traditional chemistry degree programme as well as teaching a range of courses involving various aspects of Structural Chemistry and X-ray Crystallography. During this early period and with the co-operation of industry, I became very conscious of the need for all undergraduates to attain a range of transferable skills, specifically in Scientific Communication to enhance their employment opportunities. The current courses that we run have evolved into a framework that is highly praised by the students, scoring extremely high marks (4.8/5) in the lecture assessments each year. The Computer-Aided Chemistry degree, started in 1987, effectively saved the department and was an opportunity to bring a new dimension into chemistry. The course, under my direction, has continued to grow. My intimate involvement has allowed me to develop a range of challenging courses within the programme covering such diverse areas as various programming languages (currently C++), modern graphical techniques, hardware and

interfacing, artificial intelligence, and a range of molecular modelling courses which we also offer to students on the ordinary chemistry programme. Lack of technical support has meant that hardware and software maintenance has been carried out by the small computer-aided chemistry team. I am able to offer a range of interesting research projects each year both at undergraduate and MSc level. I maintain an active interest at the secondary/HE interface through interactions with many secondary schools. Each year, my teaching is highly praised by the students and institutionally recognised in 2002 by being awarded the University Teaching and Learning Prize.

Examples of Lecture/Practical courses.

Numerical Methods	Solid State Chemistry	Data Handling	Interfacing
X-ray crystallography	Protein Structure	Data base Application	C++
Program Design	Visual Basic	Cheminformatics	Molecular
Modelling	Skills/Leadership	Artificial Intelligence	Computer Graphics
Structure Determination	Scientific Communication		Solid State Chemistry

Main Administrative Duties

I have always believed that a share of administration gives one a unique view of the operation of any university. I have held all the major positions at departmental level including Chairman of the Chemistry Courseboard, Deputy Head of Department and currently, Director of Undergraduate Studies having overall responsibility for the smooth running of all the undergraduate programmes and dealing on a day to day basis with all student problems. At university level I have acted as Deputy Dean of the Faculty of Science and been a member of various committees charged with the introduction of modular degree programmes. I am currently a member of the University Validation Board which has institutional responsibility for the introduction of all new degree programmes as well as periodic reviews. I am one of the Associate Directors of Educational Liaison being responsible for maintaining links with Greece from which the university recruits a substantial number of students.

1984-1989	Introduction Week Officer
1987-1989	Chair of staff-student liaison committee
1988-present	Computer-Aided Chemistry Professional Training Year co-ordinator
1989-1992	Chair of Chemistry Courseboard
1989-1992	Member of University Enterprise Team
1990-present	Member of departmental recruitment committee
1993-present	Associate Director of Educational Liaison responsible for links with Greece
1994-1997	Deputy Dean, Faculty of Science, Chair of Faculty Teaching Committee
1994-1998	Deputy Head of Department of Chemistry
1995-present	Final Year Undergraduate Project Co-ordinator
1998-present	Director of Undergraduate Studies

Membership of Committees

1983-1988	Board of Studies for MSc in Chemical and Biochemical Sciences and Education
1988-1997	Faculty Board (Science)
1988-1998	Royal Society of Chemistry Computer Applications Group

1990-1996	Moderator for Chemistry Programmes (Roehampton and St Mary's Colleges)
1990-1997	Faculty/Senate Working Party on Modularisation
1993-1997	Faculty of Science Management Committee
1993-1998	University Academic Standards Committee
1994-1999	Teaching Policy Development Committee
1994-present	Teaching Facilities Advisory Group
1994-1998	Teaching and Learning Innovations Group
1997-present	University Validation Board (Chair 2000-2001)
1999-present	Surrey LEA Strategy Group

Research Activities

My research interests have always related to the applications of computing to chemistry. Much of my early work in various aspects of structural chemistry involved attempting to predict physical properties and particularly magnetism from X-ray structural data where a combinations of synthesis and structure determination with integral to each project. I collaborated with the synthetic groups within the department as well as with a number of groups in other universities. It was during this time that I became interested in computer simulation. This resulted in two major awards, the first as part of a TLTP phase II project centred around computer simulation of analytical instruments and a MOD funded study of aerosol formation in nuclear accidents where it was necessary to develop software to explain the nucleation mechanisms in radioactive aerosols. About this time, I became very interested in all aspects of chemical education at both the secondary and HE levels. Since then, I have initiated a number of major projects to develop software and various educational strategies to improve the learning and teaching environment particularly in the areas of active problem solving where various chemical scenarios can be experimented with in a virtual environment. Our work at the secondary level is now nationally recognised. The Teaching Company Scheme has enabled me to continue my interest in computer-aided chemistry with a project involving the design and building of a device to remotely monitor light emission and colour distribution from indoor pyrotechnics. The second TCS project, just started, is looking at the way chemical automation and robotics can be implemented in the pharmaceutical industry in terms of individual work-cells.

Grants obtained

1984-1992	Grants totalling £900K from a variety of sources awarded individually and jointly
1993-1996	£300K from HEFCE for a TLTP Phase II project ('Computer Simulations in Chemistry and Biochemistry', Universities of Surrey, Oxford, York and Leeds)
1996-1999	£103K from MOD ('Modelling Aerosol Formation in Nuclear Accidents)
1998-2001	£76K from University Foundation Fund ('Support for IMPACT initiative')
1997	£5K from Smith-Kline Beecham (MSc Project Support)
1998	£1.5K from ICI Chemicals and Pfizer ('Support for IMPACT initiative')
1999-2000	£102K from Teaching Company Scheme ('Development of Indoor Pyrotechnics')

2000-2001	£47K from SFDLT ('Active Problem Solving in Chemistry')
2001-2002	£29K from SFDLT ('Virtual Laboratory Experiments in Organic Chemistry')
2002-2003	£204K from Teaching Company Scheme('A Factory Automation and Database Model')

Postgraduate students supervised

PhD completed	14
MSc completed	4
MSc	2
PhD collaborative	3 from June 2002

Publications 115

Current Research Interests

The development of computer-based learning materials for the teaching of chemistry
The software design of virtual reality systems in chemistry
The development of indoor pyrotechnics and the remote monitoring of their combustion.
Applications of artificial intelligence in structure prediction.
Calculation and visualisation of DNA structures.

Awards

2002	University Teaching and Learning Prize

Key Skills

Expert Software Developer
An ability to get the best out of students
Excellent managerial skills and multi-tasking.
Setting up innovative attractive courses and modules

Outside Interests

Fishing, gardening and applications of computers in the home.

Lizzie Thynne – Curriculm Vitae

Name: Ms Lizzie Thynne
Nationality: British **DOB:** 21/2/59 **Age:** 43
Address: 26 Ryde Road Brighton
Postcode: BN2 3EG
Tel/fax: 01273 872627 (work) 01273 245849 (home)

TEACHING EXPERIENCE

Sep 2001 – present

Senior Lecturer in Media Practice and Media Studies
Sussex University
Responsibilities: Convenor, BA Media Practice and Theory
I teach across the undergraduate and post-graduate curriculum specializing in video production and films studies. I am developing a programme in PhD by practice.

Feb 2001 – Aug 2001

Senior Lecturer in Media Production, University of East London

Sep 1998 – Jan 2001

Senior lecturer, BA (Hons) Media Arts, London College of Music and Media, Thames Valley University

Responsibilities: Deputy Director, Centre for Research in Music and Media Courses taught: MA Film and Moving Image (Industry module), Dissertations/Projects, Documentary Production, Studio Production (2nd year); Writing for the Media.
Ph.D supervision.

Sep 1997 - Aug 1988

Temporary lecturer in Film and Critical Studies, Napier University, Edinburgh
Courses taught: Documentary (1st and 2nd year); Narrative (1st and 2nd year); Film practice (3rd year). Dissertation supervision.

1988 - 1993

Visiting Lecturer, BA History of Modern Art, Design and Film, University of Northumbria
Courses taught: Gender and Cinema (3rd year); Melodrama (2nd year); Realism and Anti-realism (2nd year); Classic narrative/stars (1st year). Supervisor for 3rd year dissertations. Stars and Costume for BA Fashion students.

1988 - 1989

Visiting Lecturer, BA Communication Studies, Sunderland University

Sessions taught: British Cinema and State; Political Broadcasting; Censorship and Television; Family and Television; Women and Soaps; Development of the Popular Press; Contemporary British Press.

1988 - 1990

Course tutor, European Media School, Gateshead

Critical analysis of film and TV for two year production course covering reading a film; cinematic pleasure; the politics of film and television.

1989 Visiting Lecturer, Peterlee College

Video-making for school students.

1988 - 1989

Visiting Lecturer, Newcastle College

Film analysis for HND Photography students

1988 - 1989

Tutor, WEA N.Tyneside

Women's history (19th and 20th century).

Jan 1987 - August 1988:

Education Officer, Tyneside Cinema.

Duties: planning and co-ordinating public discussions around film and TV, special events, and talks by film-makers, some programming. Liaising with community and educational organisations to build audiences. Courses taught: women's cinema; in-service media studies for teachers; day events for schools.

May 1985 - August 1986:

Temporary Lecturer in English (16th century to present)

for BA (Hons) Combined Studies Nene College, Northampton.
Courses taught: Shakespeare and contemporaries (2nd year); Victorian Literature (3rd year); Authors 1830 - present; A level English.
Supervising 3rd year dissertations.

October 1982 - March 1985:

Visiting Lecturer, Sussex University

Courses taught: Women's writing and feminist theory, Shakespeare
Tutor, Brighton WEA and CCE, Sussex
Various Women's Studies courses including 'Wanton wenches and wayward wives: 17th century women's history', Victorian women.

October 1980 - June 1981:

English Language Teacher at The English School, Empoli, Florence.

FILM AND TV WORK WITH DETAILS OF FUNDERS IN LAST FIVE YEARS

Oct 2000 – Jan 2001

AHRB small grant to complete script on Claude Cahun, surrealist photographer

1996 - present

Co-director of Panache Pictures Ltd
Developing/pitching documentary proposals; producing/directing; promoting and distributing my productions.

1996 Producer/Director **Child Of Mine**
partly observational doc following a custody battle, Fresh Films(Scotland) for 'Dyke TV, **Channel Four** Beta/Hi8, 35mins
Festivals: Turin, Bologna, San Francisco, Melbourne (with Australian tour).

Producer/Director/Camera (with Nicky West) **The House**
on my mother's journey to search for her childhood home in Russia
Panache Pictures for 'Divers Memories', an international installation at Lieksa Museum Finland, May -September Curator: Chris Dorsett
Hi8,16 mins. In distribution through festivals, galleries and colleges.
Funder: **University of Northumbria**

Associate Producer **One More Push** Dir: Pratibha Parmar
on disability and pregnancy, Mental Health Media for 'Inside Out', **Channel Four**

1995 Associate Producer **Abandoned babies** Dir: Ann Hawker
Twenty Twenty Television for 'Witness', **Channel Four**

Co-producer **Little India** Dir: Jacquie Lawrence
Drama, Ipso Facto Films, Newcastle for 'New Voices',
Tyne Tees/Yorkshire/Granada Beta, 25mins

Production Manager **Hazard** Dir: Martin Spence
Interactive training CD on health and safety in English and German
Trade Films, Gateshead. Private funding.

1994 Director **After the Revolution**
on the gay movement in former Czechoslovakia Piranha Productions for 'Out', **Channel Four** (BETA/Hi8, 26 mins) Award Winner, Paris Lesbian Film Festival, Paris1996
Festivals: Berlin, Hamburg, Bremen ,Hong Kong, San Francisco, Paris, Bologna, Turin,
British Short Film.

Associate Producer Item on E. Durham Enterprise Zone
A19 Films, Sunderland, for **C4 News**, Dir: Mick Catmull

Production Manager **The Colour of Britain** Dir:Pratibha Parmar
on Asian artists, Hauer Rawlence for 'Critical Eye'**, C4/Arts Council**
16mm, 50''

CONSULTANCIES

University of North London
Faculty of Humanities and Education External Examiner
Examining Master of Research thesis

AMPE Executive member

PUBLICATIONS/ RESEARCH CREDITS SINCE 1994

Publications

*1. 'Women in the Age of Multi-Channel Television', 2000, in **Feminist Review**, no 64: Millenium Issue: One Step Beyond? (Routledge : London and New York)*

2. 'Being Seen: "the lesbian" in British television drama' in Linda Anderson and David Alderson (eds.)**Territories of Desire: Challenging the Boundaries of Contemporary Queer Culture** 2000, (Manchester University Press: Manchester and New York)

3.*'The Space Between: Mothers and Daughters in Anne Trister' in Tamsin Wilton (ed) **Immortal, Invisible: Lesbians and the Moving Image** (Routledge: London and New York, 1995) (ISBN 0-415-10725-3)*

and in
*Lynne Pearce and Jackie Stacey (eds) **Romance Re-visited** (Lawrence and Wishart, 1995).*

Productions (full details above in section 6)

1996	Producer/Director	**Child Of Mine**	Channel Four
	Producer/Director/Camera	**The House**	Panache Pictures Ltd
	Associate Producer	**One More Push**	Channel Four
1995	Associate Producer	**Abandoned babies**	Channel Four
	Co-producer	**Little India**	Tyne Tees/ Yorks/Granada
	Production Manager	**Hazard**	Trade Films
1994	*Director*	***After the Revolution***	*Channel Four*

Other research interests

During this period, I have also been engaged in developing other documentary projects with various production companies, including my own, Panache Pictures Ltd and assisting the work of digital imaging artist, Nicky West.
Since 1998 I have been researching a film project on the French surrealist photographer, Claude Cahun, for which I have made research trips to France and Jersey, funded by my previous university, Napier. I also pitched the project at the Nordic documentary Forum in Sweden in September 1998, with funding from the Lothian and Edinburgh Enterprise.
I was awarded an AHRB small grant to complete the script in 2000.

Selected Publications before 1994

Editor and co-author, **Studying Film**: **a guide and activity pack for tutors and classes**, BFI/WEA 1990
Editor, **In the Picture**, Northern regional media education magazine,1987-90
'Cinema and education', **Initiatives 8** 1988
Aspects of women's film and video production in Britain **Feminale** catalogue, Cologne, 1988

Selected papers/presentations

1999 **'**Women's employment in multi-channel television', Thames Valley University
1998 'Work in progress on Claude Cahun, surrealist photographer', Napier University
Presentation of work by Barbara Hammer, Autobiography and the Social Self, Lancaster University
Presentation of my documentary work, Napier University
'The Loudest Whisper: a lesbian melodrama for the 1960s', Glasgow Film Theatre
1997 Presentation of my film, **Child of Mine**, Immaginaria, Bologna (with British Council grant)
1996 Presentation of my work, Cineffable Film Festival, Paris
1996 **'**Gay History on Film introduction to work by Greta Schiller and Barbara Hammer', Cinewomen, Norwich
1990 'Images of Health', AIDS/Images, Projects UK, Newcastle
1988 **'**Catching our Eyes: Changes in Popular Television for Women', Northern Women Alive, Newcastle
'History as melodrama: Margarethe von Trotta's <u>The German Sisters</u>' Newcastle University
Guest writer, Feminale, International Women's Film Festival, Cologne
1987 <u>Maurice</u> as romance: the film and the novel, Newcastle University
1985 **'**Not much Cop?: Women in TV Police Series', History Workshop Conference, Ruskin College, Oxford.

Previous credits

1993 Researcher (Development) **Children of Communism**
BBC South. Dir: Penny Woolcock
Researcher **Let's do something arty**
youth arts documentary with Hi8 inserts by contributors, Tyne Tees
Director of recorded items and researcher **Raising the Roof**
live OB on youth self-build, Black Hill for **Gimme Shelter**, C4.
Researcher **Head to Head** Dir: Chris Rees
live audience discussion programme, Zenith North for Tyne Tees.
Researcher **Out on strike** Dir: Jacquie Lawrence
about two miners' wives who fell in love during the miners' strike.
My Aunt Fanny Films, Newcastle for **Summer's Out,** C4.

1992 Writer **The Knight's Tale**
short fantastic drama adapted from medieval fairy tale.
Researcher **Working Class Dykes from Hell**
on working class women's experiences of sexuality
My Aunt Fanny Films for **Out**, C4 Dir: Jacquie Lawrence
Production Manager **Journey through Sound** Dir:Carolyn Reid
short drama about a day in the life of a deaf woman, Village Films, BFI/C4 16mm

1991 Assistant to Billie Whitelaw **Firm Friends** Dir: David Hayman
drama series, Zenith/Tyne Tees.

1990 Co-writer/Researcher **Dressing Up** Dir:Penny Woolcock
Development of drama doc. script on the history of drag, Glass Fish for Arts Council/C4.

HEALTH

No health problems.

OTHER INFORMATION

Languages
Fluent Italian, working French and German.

Selected short training courses/festivals attended

2000 Sheffield Documentary Festival
AMPE Conference, Bournemouth University
1999 Association of Media Practice Educators' Conference, Sheffield Hallam
Edinburgh Television Festival
Media 100 short course, Blast Theory, London
Breaking the Boundaries: Conference on Theory and Practice in Documentary, Stirling University.
Student profiling, TVU
1998 Director of Studies training, TVU

Sharpen Your Presentation Skills (three day pitching workshop)
Filmkontackt Nord, Kiruna, Sweden (also observer at Nordisk Documentary Forum)
Queer Film Conference, Warwick
Screen Conference, Glasgow

1997 Presentation of my film, **Child of Mine** at San Francisco Lesbian and Gay Film Festival

1996 Adobe Premiere, Cambridge Exam Module 1,Kingsway College

1994 Introduction to Avid, Stonehills Studios, Gateshead

1993 San Francisco Lesbian and Gay Film Festival (with Northern Arts award)
Edinburgh Television Festival

1990 Robert McKee's Story Structure (on feature film writing)

1990 Black Arts Conference, Projects UK, Newcastle

1989 Redefinitions for the 1990s, Media Studies in Higher Education, BFI
National Photography Conference, Newcastle

1988 Berlin International Film Festival (with Northern Arts award)
Introducing Video Technology, NEMTC
BFI Conference, York University

1987 Teaching Alternative Media, SEFT, London
BFI Easter School, Christchurch College, Canterbury
Beginning Media Education, Carlisle Teachers' Centre
Video-making in schools, NEMTC
Edinburgh International Film Festival

EXPERT GROUP FACILITATOR

ANNE MATTHEWS

Employment Experience Summary

Following an initial teaching career in both secondary and adult education in the UK and overseas, Anne Matthews spent 15 years working for a department of Oxford University specialising in assessment before joining START Services in 1999 as Research and Training Manager. Much of her work was targeted at the commercial sector where she and her teams provided specialist advice on the assessment, evaluation and quality assurance of in-company training programmes. She led the development of a Validation Service for both educational and commercial organisations seeking external recognition and certification of their programmes. She was also responsible for the development of her division as an Awarding Body for a number of high-level NVQs, including Management, Project Management and Training and Development.

Since joining START Services, Anne has been involved in a number of research projects, including work for the Centre for Developing and Evaluating Lifelong Learning at the University of Nottingham. She has contributed to various DfEE, DfES and QCA funded projects, including *Quality Assurance and Control across all Qualifications* and *The Role of the Internal Verifier,* and is currently involved in a DfES/HEFCE Innovations Fund Project to disseminate information about current developments within higher education in the broad area of skills and other competencies. She is a Research Fellow at the University of Oxford, Department of Educational Studies and is the facilitator for the OUDES' Expert Group conducting comparability studies for the UCAS Tariff.

Anne has also conducted a number of consultancy contracts, including the successful facilitation of a project group in Lucent Technologies tasked with developing the Business Excellence Model in the company, management training workshops for EWS (English, Welsh and Scottish Railways), the training of NVQ assessors for Northamptonshire Chamber of Commerce Training and Enterprise and the oil and gas sector, and the development and assessment of NVQ Management candidates at the BBC Audience Lines.

Qualifications

1970 BA (Hons) French, Leicester University
1971 Certificate of Education, Leicester University
1980 MA Curriculum Development and Evaluation, Sussex University
1999 NVQ Training and Development Assessor Award (D32, D33)

Employment History

1999 – present	Research and Training Manager, START Services Ltd
1995 – 1999	Deputy Director, Vocational Qualifications, University of Cambridge Local Examination Syndicate (UCLES) Major responsibility for the expansion of the division as an Awarding Body for high-level NVQs and the continuing development of the Validation Service.
1992 – 1995	Manager, Vocational Qualifications, University of Oxford Delegacy of Local Examinations (UODLE) Specific responsibility for the initial development of the division as an Awarding body and ensuring the integration of the Validation Service into the UODLE portfolio of products and services.
1988 – 1992	Head of Validation, UODLE Responsible for extending the UODLE's expertise in assessment and evaluation into the commercial sector through the development of a Validation Service
1987 – 1988	Record of Achievement Accreditation Officer, UODLE
1983 – 1986	Research Assistant, UODLE Work on the development of Records of Achievement
1978 – 1979	Supply teacher, Leicestershire and Oxfordshire LEAs
1976 – 1978	Lecturer, College of the Bahamas, Nassau, Bahamas Member of small externally funded team tasked with developing and implementing a programme to improve the employability of adults for whom there had been no secondary education provision.
1971 – 1976	Teacher, Leicestershire and Oxfordshire LEAs

Personal Details

Address	2 Thatch Cottages, Elsfield, Oxford OX3 9UL Tel: 01865 351798 Fax: 01865 358288 e-mail: elsfield@aol.com

CURRICULUM VITAE

Name Jennifer Anne Tuson **Title** Dr

Address Hillhead Steadings Two
Portlethen
Aberdeen AB12 4QP

Telephone 01224 782705

Director of START Services Ltd – STatistical Analysis, Research and Training
After more than 20 years working in education in the fields of research, development, teaching, training, management and consultancy, START Services Ltd was established in October 1997 offering research and training services to institutions in both the public and private sectors.

Dr Tuson is an experienced researcher, comfortable with both qualitative and quantitative approaches. She is experienced in design, conduct, analysis and reporting of small-scale in-depth case studies and large-scale surveys. She is also skilled in training new inexperienced researchers and research students in research methods.

In addition to contracts for START Services, Dr Tuson is an associate lecturer for the Open University, tutoring Masters module in Research Methods in the Social Sciences, the Robert Gordon University, tutoring Research methods to final year undergraduates Social Workers and Aberdeen University, managing the Faculty of Education's research degree programme and supervising research degrees.

Academic and Professional Development

Professional Membership
British Educational Research Association
Scottish Educational Research Association
European Educational Research Association
UK Evaluation Society

Academic and Professional Qualifications
1972 BSc 1st Class Hons Mathematics; Sheffield University
1973 Dip Ed Secondary; Sheffield University
1975 MSc Probability and Statistics; Sheffield University
1991 DPhil Educational Measurement; University of Oxford
1994 SVQ Training and Development Assessor Awards (D32, D33)
2001 D34

Professional development activities
1984-present Various IT courses
1986 Management course
1993 Counselling course
1997 Business start-up course

Career History

1991-97	*Northern College*	**Depute Head Department of Educational Research** **Director Research Degrees Programme (MPhil and PhD)** **Adviser and assessor for Scottish Vocational Qualifications in Training and Development at Levels 3 and 4** **Counsellor**
1983–91	*University of Oxford Delegacy of Local Examinations*	**Researcher/Deputy Director of Research**
1982–83	*University of London Institute of Education*	**Researcher**
1977-82	*National Foundation for Educational Research*	**Researcher**
1975-77	*Sheffield Education Authority*	**Teacher**

Contracts secured in 2002

Research and analysis	**Training and facilitation**
Analysis of data on assessment and progress of pupils for Falkirk Council	Management of Research Degrees Programme and supervision of research students in Aberdeen University
Evaluation of Key Skills testing in ICT for the Centre for Developing & Evaluating Lifelong Learning (CDELL) and the Qualifications & Curriculum Authority (QCA)	Preparation & delivery of induction training for new research students in The Robert Gordon University
Analysis of Key Skills test data for the Qualifications & Curriculum Authority (QCA) and	Preparation & delivery of research module for BA in Social Work, for The Robert Gordon University
Analysis of World Class Test data for the Assessment and Qualifications Alliance (AQA)	Delivery of D32 and D33 training courses for clients in a variety of sectors
Analysis and reporting the Paving the Way survey data for UCAS	Internal verification of portfolios for client in oil & gas sector
Investigation of different approaches to Guidance in secondary schools for Aberdeen University	
Analysis of Adult Basic Skills survey data for the Centre for Developing & Evaluating Lifelong Learning (CDELL)	
Investigation into the impact of SVQ training for Aberdeen City Council Social Work department	

EVIDENCE EXAMINED FOR THE BTEC NATIONALS

Edexcel Specifications for the BTEC Nationals in Applied Science and Media, June 2002.

These include:

- The combinations of units for each award
- Unit content
- Assessment guidelines
- Grading criteria for each unit

EVIDENCE EXAMINED FOR THE AVCEs

AQA Specifications for the AVCEs in Science and Media: Communication and Production, 2002.

These include:

- The combinations of units for each award
- Unit content
- Assessment guidelines
- Grading criteria for each unit

AQA Portfolio Standardising Material for Unit 6

This is a lengthy document of candidate work. If required, it could be obtained from Edexcel.

APPENDIX 3

MAPPING THE BTEC NATIONAL (6 UNIT) AWARDS IN APPLIED SCIENCE TO THE AVCE IN SCIENCE

AVCE Unit	**NA Applied Biology**	**Pg**	**NA Applied Chemistry**	**Pg**	**NA Applied Physics**	**Pg**	**NA Applied Science (Environmental)**	**Pg**	**NA Assm't**
1. Investigating Science at Work									
2. Monitoring the Activity of the Human Body	9. Human Physiology	115							
3. Controlling Chemical Processes			14. Industrial Applications of Chemical Reactions. *See note (a)*	167			13. Chemistry for Biological Technicians ***(some o/lap)***	157	
4. Controlling the Transfer of Energy					11. Energy Changes, Sources & Applications ***(some o/lap)***	137			
5. Synthesising Organic & Biochemical Compounds	10. Biochemical Techniques ***(some o/lap)***	127	18. Industrial Applications of Organic Chemistry ***(some o/lap)***	213			13. Chemistry for Biological Technicians ***(some o/lap)***	157	
6. Carrying out Scientific Investigations	7. ICT & Lab Mgt Info Systems ***(some o/lap)***	93	7. ICT & Lab Mgt Info Systems ***(some o/lap)***	93	7. ICT & Lab Mgt Info Systems ***(some o/lap***)	93	7. ICT & Lab Mgt Info Systems ***(some o/lap)***	93	**IVA**
7. Obtaining Products from Organisms	17. Genetics and Genetic Engineering ***(some o/lap)***	203							
17. Medical Physics					21. Medical Physics Techniques. *See note (b)*	241			
18. Laboratory Organisation	2. Laboratory Organisation	39	2. Laboratory Organisation	39	2. Laboratory Organisation	39	2. Laboratory Organisation	39	

MAPPING THE BTEC NATIONAL (12 UNIT) CERTIFICATES IN APPLIED SCIENCE TO THE AVCE IN SCIENCE

AVCE Unit	**NC Appl Sci (Lab & Ind Science**	**Pg**	**NC Appl Sci (Forensic Science)**	**Pg**	**NC Appl Sci (Medical Science)**	**Pg**	**NC Assessment**
1. Investigating Science at Work	3. Workplace Practices. *See note (c)*	51	3. Workplace Practices. *See note (c)*	51	3. Workplace Practices. *See note (c)*	51	**IVA**
2. Monitoring the Activity of the Human Body	9. Human Physiology	115			9. Human Physiology	115	
3. Controlling Chemical Processes	14. Industrial Applications of Chemical Reactions. *See note (a)*	167					
4. Controlling the Transfer of Energy	11. Energy Changes, Sources & Applications ***(some o/lap)***	137					
5. Synthesising Organic & Biochemical Compounds	10. Biochemical Techniques ***(some o/lap)***	127					
	18. Industrial Applics of Organic Chemistry ***(some o/lap)***	213					
6. Carrying out Scientific Investigations	5. Scientific Method. *See note (d)*	71	5. Scientific Method. *See note (d)*	71	5. Scientific Method. *See note (d)*	71	**IVA**
	7. ICT & Lab Mgt Info Systems ***(some o/lap)***	93			7. ICT & Lab Mgt Info Systems ***(some o/lap)***	93	
17. Medical Physics			21. Medical Physics Techniques. *See note (b)*	241			
18. Laboratory Organisation	2. Laboratory Organisation	39	2. Laboratory Organisation	39	2. Laboratory Organisation	39	

MAPPING THE BTEC NATIONAL (18 UNIT) DIPLOMAS IN APPLIED SCIENCE TO THE AVCE IN SCIENCE

AVCE Unit	**N Dip Appl Sci (Lab & Ind Science)**	**Pg**	**N Dip Appl Sci (Forensic Science)**	**Pg**	**ND Assm't**
1. Investigating Science at Work	3. Workplace Practices. *See note (c)*	51	3. Workplace Practices. *See note (c)*	51	**IVA**
2. Monitoring the Activity of the Human Body	9. Human Physiology	115			
3. Controlling Chemical Processes	14. Industrial Applications of Chemical Reactions. *See note (a)* 13. Chemistry for Biological Technicians ***(some o/lap)***	167 157			
4. Controlling the Transfer of Energy	11. Energy Changes, Sources & Applications ***(some o/lap)***	137			
5. Synthesising Organic & Biochemical Compounds	10. Biochemical Techniques ***(some o/lap)*** 18. Industrial Applics of Organic Chemistry ***(some o/lap)*** 13. Chemistry for Biological Technicians ***(some o/lap)***	127 213 157			
6. Carrying out Scientific Investigations	5. Scientific Method. *See note (d)* 7. ICT & Lab Mgt Info Systems ***(some o/lap)***	71 93	5. Scientific Method. *See note (d)*	71	**IVA**
17. Medical Physics	21. Medical Physics Techniques. *See note (b)*	241			
18. Laboratory Organisation	2. Laboratory Organisation	39	2. Laboratory Organisation	39	

(a) Content is similar, but BTEC requires application of skills and use of practical data to investigate chemical reactions. AVCE Unit 3 is assessed in a 1½ hour examination.
(b) Content is similar, but BTEC unit approaches delivery and assessment from context of being a science technician in a hospital.
(c) Content is similar, but BTEC requires in-depth study of a single organisation from the perspective of the technician employed in the organisation (as opposed to two reports on surveys of local organisations for the AVCE.
(d) Content is similar, but, unlike the AVCE unit, the BTEC unit is designed to develop the principles of application of the scientific method to underpin studies and applications of science elsewhere.

MAPPING THE BTEC NATIONAL (6 UNIT) AWARDS IN MEDIA TO AVCE IN MEDIA: COMMUNICATION & PRODUCTION

AVCE Unit	**NA Radio** **Pg**	**NA Video** **Pg**	**NA Print** **Pg**	**NA Music Production** **Pg**	**NA Digital** **Pg**	**NA Assm't**
1. **Analyse Media Products**						
2. Skills Development						
3. Research for Media Production	2. Research Techniques 39	2. Research Techniques 39	2. Research Techniques 39	2. Research Techniques 39	2. Research Techniques **39**	FMP
4. Produce a Media Product	5. Production Management 67	5. Production Management 67	5. Production Management 67	5. Production Management 67	5. Production Management **67**	FMP
5. Media Marketing						
6**. Media Industries**						
7. The Medium of Sound				7. Audio Production Techniques 83		
8. Creating Moving Image Products		9. Pre-production Techniques 99 10. Understanding Video Technology 105 28. Video Editing 247				
11. Producing Radio	14. Speech Package Production 137					
12. Desk Top Publishing			43. Digital Writing 357			
13. **Writing for the Media**			47. Writing & Editing Copy 389			

MAPPING BTEC NATIONAL (12 UNIT) CERTIFICATES IN MEDIA TO AVCE IN MEDIA: COMMUNICATION & PRODUCTION

AVCE Unit	**NC Audio Production**	**Pg**	**NC Moving Image Production**	**Pg**	**NC Print Production**	**Pg**	**NC Assessment**
1. **Analyse Media Products**	1. Understanding the Media	31	1. Understanding the Media	31	1. Understanding the Media	31	
2. Skills Development	3. Media Skills Workshop	47	3. Media Skills Workshop	47	3. Media Skills Workshop	47	FMP
3. Research for Media Production	2. Research Techniques	39	2. Research Techniques	39	2. Research Techniques	39	**FMP**
4. Produce a Media Product	5. Production Management	67	5. Production Management	67	5. Production Management	67	**FMP**
5. Media Marketing							
6**. Media Industries**							
7. The Medium of Sound	7. Audio Production Techniques (***some o/lap***)	91					
8. Creating Moving Image Products			9. Pre-production Techniques 10. Understanding Video Technology 28. Video Editing	99 155 247			
11. Producing Radio	14. Speech Package Production	137					
12. Desk Top Publishing							
13. **Writing for the Media**					47. Writing & Editing Copy	389	

MAPPING BTEC NATIONAL (18 UNIT) DIPLOMAS IN MEDIA TO AVCE IN MEDIA: COMMUNICATION & PRODUCTION

AVCE Unit	N Dip Audio	Pg	N Dip Moving Image	Pg	N Dip Publishing	Pg	N Dip Assessment
1. **Analyse Media Products**	1. Understanding the Media	31	1. Understanding the Media	31	1. Understanding the Media	31	
2. Skills Development	3. Media Skills Workshop	47	3. Media Skills Workshop	47	3. Media Skills Workshop	47	**FMP**
3. Research for Media Production	2. Research Techniques	39	2. Research Techniques	39	2. Research Techniques	39	**FMP**
4. Produce a Media Product	5. Production Management	67	5. Production Management	67	5. Production Management	67	**FMP**
5. Media Marketing					50. Marketing & Public Relations	411	
6**. Media Industries**	4. Professional Practice in the Media Industry	53	4. Professional Practice in the Media Industry	53	4. Professional Practice in the Media Industry	53	
7. The Medium of Sound	7. Audio Production Techniques ***(some o/lap)***	83					
8. Creating Moving Image Products			9. Pre-production Techniques 10. Understanding Video Technology 28. Video Editing	99 105 247			
11. Producing Radio	14. Speech Package Production	137					
12. Desk Top Publishing					43. Digital Writing	357	
13. **Writing for the Media**					47. Writing & Editing Copy	389	