Confidential Report on the Review of
Intermediate GNVQ in Science
at
City of Leicester School and Sixth Form Centre
on 3 November 2003

Prepared for
the
Corporate Director
Leicester City Council
Education & Lifelong Learning

by

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1. Summary and recommendation

A review of the science provision and curriculum changes at the City of Leicester School and Sixth Form (the ‘School’) has been conducted by an independent educational consultant. The correspondence, minutes, notes and reports provided by Corporate Director of Leicester City Council, Education & Lifelong Learning and the School have been examined in detail. The provision made by the School has been cross-referenced to regulatory documents relating to the curriculum, awarding body guidelines, and university admissions procedures and policies.

Dr Geoff Parks, Director of Admissions for the Cambridge Colleges is unequivocal. ‘Intermediate GNVQ at Key Stage 4, as long as it doesn’t detract from students’ transition to A Level, is acceptable. Performance in A Level and, where used, aptitude tests such as the BMAT for medical students, are important factors for acceptance at Cambridge.’

The change to Intermediate GNVQ in Science at the School was implemented with the appropriate consultation with parents, students, and governors. Minutes were adequately and appropriately recorded.

Teaching observation was undertaken at the School on 3 November 2003. The teaching was of a very good or good standard. Staff have been allocated to various groups and teach to their subject strengths and specialisms. Criteria for assessment of work are reproduced clearly onto feedback forms for students. The requirements for GNVQ and GSCE are clearly indicated for respective students. Evidence sheets are provided so that all students can monitor effectively their progress. On the portfolio evidence seen, student work is annotated clearly, providing both a summative and formative assessment. Students of differing abilities have made good use of resources and work is well organised and presented. A number of students were interviewed, resulting in an anticipated cross-section of opinions: all students were responsive and knowledgeable.

The School, in common with several other centres across the country, has made extra provision for students wishing to continue their science studies to A Level, and to degree level. It could be considered that progression opportunities for students in other schools could be enhanced by the approach adopted by the School and the other, similar, centres around the country.

The Headteacher, governors and teaching staff have worked with concerned parents and students to develop a comprehensive programme of study with excellent breadth and content, which should more than adequately prepare students to maximise their potential both in public examinations and for a career in science. The science team appears to be an appropriately qualified, highly motivated, dedicated group of professionals. They have got to grips with the course implementation of the Intermediate GNVQ, and have produced an imaginative and comprehensive scheme of work and course material for staff training of an exemplary and publishable standard.

The small numbers of students requiring GCSE science at the School, and the range of abilities covered, would seem to preclude the provision of this qualification to students in a separate GCSE set. More importantly, with the careful implementation of the current programme, it would appear to be unnecessary. The disappointment is that the ‘switch’ to Triple Award Science has precluded the option of an AS Level Science subject to next year’s Year 11 students, an approach that was truly innovative.

It is recommended that parents entrust their children’s futures to the School: it is imperative that students and parents wholehearted embrace the GNVQ and the extra provisions made for Triple Award Science.

It is envisaged that the content of this report should fully address parental concerns. Any supplementary questions should be fielded through the Corporate Director of Leicester City Council, Education & Lifelong Learning.
2. Background to report

In the late 1990s, the Secretary of State for Education granted schools the option to undertake Intermediate GNVQ in Science at Key Stage 4 as an alternative to the GCSE, underlined by the changes in Curriculum 2000. Many schools across the country offer this course to their students: the School is one of them.

However, the School’s decision to replace the GCSE with the Intermediate GNVQ has resulted in a number of complaints from parents of students in the current Year 10. These parents are concerned that their children’s future careers may be adversely affected as a result of the changes to the School’s curriculum.

The School is providing additional coaching for students wishing to take the GCSE examination instead of the GNVQ. However, the group of parents has taken its complaint to Leicester City Council, Education & Lifelong Learning. The group has specifically requested the removal of a number of the Governors, and that the GCSE course material be taught separately from the GNVQ.

The Corporate Director of Leicester City Council, Education & Lifelong Learning, requires an independent viewpoint to ascertain whether students following a GNVQ programme are at any disadvantage compared to those undertaking a GCSE, and has requested that Dr John Beeby conduct a review of the science provision and curriculum changes at the School.

In order to ensure that the review addresses the concerns that have been raised, Dr Beeby has been provided with copies of the minutes of meetings, reports and notes from the School, while copies of correspondence between parents, students and staff have been received from Leicester City Council, Education & Lifelong Learning.

2.1 Biographical note

John Beeby  
BSc, PhD, MIBiol, CBiol

John Beeby has over twenty years’ experience in teaching and examining students aged 14-18. He is a Principal Examiner for GNVQ, Chief Examiner for GCSE, Principal Examiner for Twenty-first Century Science and Acting Subject Officer for A Level (Oxford, Cambridge and RSA (OCR) Awarding Body). He has taught ‘single’ sciences at O Level, GCSE Science, Intermediate GNVQ Science, A Level Chemistry and A Level Biology, as well as the International Baccalaureate (IB) Biology and Chemistry, and has supervised these IB students’ extended essays.

He therefore has the necessary expertise and experience to offer an impartial evaluation of the GCSE:GNVQ option, the School, and the progression opportunities for students of all abilities.
3. Rationale for offering GNVQ

Scientists and educationists have expressed concern that the traditional approach of the GCSE lacks relevance for today’s students. This concern has been shared by Ofsted and QCA, and a consultation process is currently underway for a new 14-19 science curriculum. Intermediate GNVQ has been offered as a Post 16 qualification for a number of years, and in 1994, one school was given special dispensation by Sir Ron Dearing to pilot the GNVQ as an alternative to GCSE for Key Stage 4 students.

The course was seen as stimulating and encouraged the development of higher order learning skills. The specialised nature of some areas of the course, eg mole calculations and titrations in Chemistry, far outweighed the demands of the GCSE of that time.

The pilot was successful and provision was formalised in Curriculum 2000 (QCA 2002a).
4. GNVQ:GCSE comparability

For the purposes of ensuring that readers of this report understand the frame of reference in which it has been written, the following information might be useful.

Intermediate Level GNVQs are equivalent to four GCSEs grade A*-C (QCA 2003). GNVQs comprise 360 guided learning hours of study (QCA, 2003). The three main Awarding Bodies offer this choice at 14-16.

Since Curriculum 2000, it is estimated that several hundred schools across the country have adopted Intermediate GNVQ instead of GCSE across a range of subjects, including science, at age 14-16.
5. Progression – Sixth Form, Further Education and Higher Education

5.1 Sixth Form and Further Education

The GNVQ specifications provided by the respective Awarding Bodies highlight appropriate progression to GCE A Level. For example, ‘units such as Biotechnology and Genetics and The Chemistry of Renewable Resources provide a sound basis for study at GCE A Level, eg, A level Biology, A Level Chemistry’ (AQA, 2003).

5.2 Higher Education

There are no reports in the educational literature on the progression of students from Curriculum 2000 Intermediate GNVQ because of the year of its inception. One centre in the country has, however, offered the GNVQ to all its pre-16 students since 1994. Students remaining at this college then undertake either the International Baccalaureate (IB) or an advanced vocational course. Of those undertaking the IB, progression over the last four years has been as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of students</th>
<th>Number progressing to HE</th>
<th>Number on ‘gap’ year</th>
<th>Additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>40</td>
<td>34</td>
<td>0</td>
<td>1 medical student (Leeds)</td>
</tr>
<tr>
<td>2001</td>
<td>43</td>
<td>38</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>50</td>
<td>36</td>
<td>2</td>
<td>1 Oxford student</td>
</tr>
<tr>
<td>2003</td>
<td>57</td>
<td>53</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

University admissions officers’ advice is that good results in A levels, International Baccalaureate or Scottish Certificates of Education (Highers) are more important than students’ results at the end of their Year 11 studies.

More significantly, the Biomedical Admissions Test (BMAT) is becoming an increasingly important selection tool for university admissions in biomedical disciplines. The BMAT is designed to facilitate suitable access by supplementing existing sources of information (such as examination results, interview and personal references). The Royal Free and University College of London Medical School, the Medical Schools of Oxford and Cambridge Universities, the Cambridge Veterinary School and the Oxford Physiological Science course are piloting the BMAT this autumn for entry in October 2004. Other universities have already expressed interest in adopting it as part of their admissions process.

The BMAT examination assists in selection of suitable candidates by:

- identifying applicants with the aptitude, skills and capacity successfully to apply their knowledge in undergraduate courses
- providing fair assessments of applicants from a wide range of educational and social backgrounds by addressing generic academic skills and the capacity to apply basic science knowledge, which may be less susceptible to coaching than examinations
- challenging even those who achieve the highest possible grades in public examinations, thus helping those universities who must choose between such able applicants to do so more objectively
- providing a common basis for comparing candidates from different backgrounds or having different qualifications, including mature applicants and those from other countries.

(UCLES, 2003)
It may be considered, therefore, that for the italicised sections, the Intermediate GNVQ facilitates better provision of these than the GCSE in Science.

To study Medicine at the University of Oxford, the conditional offer is AAA at A Level, including Chemistry, and Biology and/or Mathematics and/or Physics. Dr Catherine Hawkins Pre-Clinical Faculty Office, Medical Sciences Teaching Centre at Oxford, stated that ‘we do require that your knowledge of sciences meets GCSE standards’ and acknowledged that ‘this may involve study in your own time’. She suggested that normal GNVQ provision may cover topics at a ‘rather too superficial level’ but an applicant with a ‘very good performance at the Intermediate level in GNVQ science followed by a chemistry A-level (plus the other usual requirements) would certainly be considered’. She pointed out that one section of the BMAT test is based on the content in GCSE Double Award Science. (Personal communication to Dr Beeby, 2003)

Dr Geoff Parks, Director of Admissions for the Cambridge Colleges is unequivocal. ‘Intermediate GNVQ at Key Stage 4, as long as it doesn’t detract from students’ transition to A Level, is acceptable. Performance in A Level and, where used, aptitude tests such as the BMAT for medical students, are important factors for acceptance at Cambridge.’ (Personal communication to Dr Beeby, 2003)

As the Corporate Director of Leicester City Council, Education & Lifelong Learning points out (letter to parent group, 10 July 2003), ‘In setting up the programme, the school has received an indication from a number of Higher Educations (HE) institutions that they wholeheartedly endorse GNVQs as being a good and valid route into HE. … the Qualifications and Curriculum Authority (QCA)… cannot regulate for the admissions policies of Higher Education institutions. Therefore it is not possible to state categorically that there is one-to-one equivalence between any set of qualifications or indeed, Examination Boards’.

Opportunities for academic progression can therefore be summed up as:

- A good GCSE performance, together with the requisite grades/subjects at Post 16 for the degree chosen means that student applications will be considered
- A good GNVQ performance, together with the requisite grades/subjects at Post 16 for the degree chosen means that student applications will be considered
- Students with Intermediate GNVQs from other schools have been accepted by the top universities
- The BMAT will become increasingly important in the selection process for biomedical degrees (questions in one section are based on and limited to Double Award Science, not Triple Award, as is offered by the School)

Of course, it is also a fact of life that there are many people who have achieved the prerequisite grades at A Level, backed up by O Levels, GCSEs and/or GNVQs, who have passed additional entrance exams with flying colours, and who still have not gained admission to their ‘first choice’ university.
6. Objectives of visit

The brief from Leicester City Council, Education & Lifelong Learning is to examine the School’s rationale for adopting GNVQ and the consultation procedure followed prior to making this change; the implementation of the course; observe teaching in the School, and interview students and look at a selection of their portfolios; and make a considered judgment on the School’s comparability with other schools’ science provision.

6.1 Rationale for adopting GNVQ

In its School Improvement Plan, 2003, the School sets out its objectives as the delivery of a curriculum which ‘challenges all learners… provides opportunities to learn in different ways’, and ‘uses modern technology effectively and appropriately’.

Ofsted inspections and reports have highlighted improvements in success in teaching, school leadership and management and the school has been awarded Specialist School status. The percentage of A* - C grades at GCSE for the last two years has ranged from 47-50%, and in comparison with national averages, the improvement in performance between 1998 and 2002 was in parallel with national trends (DfES, 2002). At Key Stage 3, the Average Points Score in English, Mathematics and Science, and the percentage of students achieving Level 5 and above has increased significantly, and in 2003, exceeded the national average.

Notwithstanding these improved results, and in common with a concerned body of academic and professional scientists, it is considered that the current GCSE in Science is ‘failing students of all abilities’. The Science Faculty discussed the inadequacies of GCSE Science, which they considered to be students’ lack of interest in the subject matter, the uninspired content of GCSE, the degree of recall required (which students rapidly forget), and the spiral curriculum necessitating the exposure of students to the same topics at all key stages.

In April 2002, the Head of Science was invited to an introductory day at The City Technology College, Kingshurst, and was impressed by the GNVQ package, which had been developed to fulfil the requirements of the course and includes ‘off the shelf’ schemes of work for its implementation. Information was fed back to the Science Faculty and Senior Leadership Team (SLT), who were very interested in the course, and a member of the Kingshurst team visited the School to present to the SLT and Science Faculty.

6.2 Consultation for change

6.2.1 Educationists

During 2001-02, proposals for a change from GCSE Double Science and the introduction of a GNVQ Science course were presented to the Governors’ Curriculum Committee. This was accepted on the grounds that the course would benefit pupils across the full range of ability; that it is more practical and would create more interest in science than the somewhat outdated GCSE material: it had received Government approval and had been successfully trialled in certain Technology Colleges: the course qualified for the equivalent of four GCSEs: plus these proposals had been welcomed by three medical schools. The recommendation of the Curriculum Committee was then put before a full Governors’ Meeting (Griffiths, 2002).

One of the governors presented a report on her visit to the Science Department (Kavanagh, 2002). The Governors acknowledged the benefits of offering students ‘a relevant, broad experience’ in science, and endorsed the introduction of the GNVQ.
At the time of the implementation of the course, the Head of Science investigated progression to Further and Higher Education. Local colleges were surveyed (although the vast majority of students progress to the Sixth Form at the School), along with six universities, including the University of Cambridge and the University of Oxford.

Admissions’ tutors conversant with the course suggest that Intermediate GNVQ prior to A Level is a satisfactory alternative to GCSE Science for science degrees, but the main message from the Oxbridge universities concerning admission to Science and Medical Sciences courses is unequivocal, that performance in A Level is the more significant. (Personal communications to the Head of Science)

Mrs Susan Stobbs, Director of Admissions for the Cambridge Colleges, Pembroke College Cambridge, stated that ‘the important thing is to get courses that stimulate students, and equally give them a good base for coping well with the required A level subjects’. She added that a good foundation in mathematics is very important for all science courses at Cambridge. For Medicine and Veterinary Medicine, all candidates have to satisfy the pre-medical requirements and take the Biomedical Admissions Test (BMAT). This requires a knowledge of biology, chemistry and physics at least to GCSE Double Award Science. (Personal communication to the Head of Science)

6.2.2 Parents

A presentation of the course was made to Year 9 parents in summer 2002 (these students are now in Year 11). Attendees were impressed, very few questions were asked about the course, and no complaints were received.

Parents of students in the then Year 8 (the current Year 10) were not present at this meeting. They were invited to attend a presentation the following year (ie May 2003), when their children were about to embark on their Year 9 studies.

6.3 Implementation

The GNVQ has been implemented in two distinct ways.

6.3.1 Implementation – 2002

Following the implementation of the GNVQ in September 2002, the science staff was impressed with increased levels of motivation of students. The reaction of pupils was reported to be more enthusiastic than those studying the GCSE syllabus (Griffiths, 2002).

Students are taught the course in nine periods over two weeks. The minimum ICT provision over this period is two lessons: an investment of £20 000 has been made in laptop computers to facilitate the running of the specification, and the use of computer suites is supplemented by the use of wireless laptops.

From the outset, it was acknowledged that some Physics topics, which are necessary groundwork for an A level course, are not included in the GNVQ material, and it was proposed that these should be covered during the period after the exams before the end of the summer term 2004 for those pupils who required them (2003, Griffiths).

A full in service training programme was provided for staff by The City Technology College, Kingshurst.
On 22 May, 2003, a presentation of the GNVQ Science Course was held for Year 9 parents. The demonstration of the course and teaching materials was generally well received, but some parents were clearly unhappy that only GNVQ was on offer.

The reasons given for their concerns are that the original School prospectus which they had received when their children started at the School had stated that GCSE Science was offered at Key Stage 4. In addition, their perception was that GNVQ Science is unacceptable for either university education or transfer to other schools and sixth form colleges.

Following up on specific parental concerns, further research as to progression opportunities at a local school’s Sixth Form was conducted: the headteacher designate of this school stated that GNVQ Science would be no bar to entry to their Sixth Form. In addition, governors received further indications of approval of the GNVQ Science course from a Head of Science in Wolverhampton and a former Head of Pharmacy at Leicester Royal Infirmary.

The Headteacher discussed and subsequently agreed further changes to the curriculum with these parents during the summer holidays, and reported this to the governors at their first termly meeting held on 2 October. He also reported that, of a cohort of 220 pupils, 38 had originally opted for GCSE Sciences, but seven had since withdrawn because they preferred to take extra IT.

This left 31 pupils wanting to do GCSE. It was not possible to arrange a specific GCSE course to cater for all of them because they are of differing abilities. The GCSE study is therefore taking place in additional hours. (Griffiths, 2003)

Historically, GCSE ‘Triple Award’ Science has been offered to students ‘after hours’ for the past 10 years at the School for those students who wanted to study ‘separate sciences’, and improve on the timetabled ‘Double Award’ Science. For the 2002 cohort, this time was used to set up a ‘transition programme’ for the GNVQ students, who were provided with extra tuition and the opportunity to sit AS Level Chemistry or Physics at the end of Year 11, thus freeing up valuable time in Year 12 to concentrate on other A Level subjects. Plus, for those students who did not plan to stay on to the Sixth Form, it gave them an opportunity to leave at the end of Year 11 with an AS Level.

In 2003-04, this time – and manpower – has been reallocated to providing the ‘Triple Award’ Science for the 31 of the 220 pupils who wish to take GCSE. It will not be possible, therefore, for the current Year 10 students to do the AS level in their Year 11.

Students work through the GNVQ course in class as normal from the beginning of Year 10. They cover the majority of the content required for GCSE in these lessons, and will do the usual type of revision for exams in Year 11. Some extra homework topics are set in Year 10, the total amount of which will not go beyond the quantity expected of an able Key Stage 4 student. In Year 11 these students will continue to use the ‘Triple Award’ Science sessions to prepare for the GCSE.

The limited skills required for GCSE internal assessment are all encompassed within the GNVQ practical assignments. Some of the GNVQ coursework can be marked to GCSE criteria.

Assuming students have kept up with the work and their homeworks are of a reasonable standard, they will be entered for GCSE at entry time in Year 11 (February) instead of entering the GNVQ.

With the additional educational skills gained from GNVQ, students should be well prepared for the GCSE examinations, GCSE practical work, and the GCSE elements that are tested in the BMAT, should they apply to do a biomedical degree.
6.4 Teaching observation

The teaching observed on 3 November, comprising four groups of differing ability, was of a very good, or good, standard. Lessons were appropriately structured with evidence of planning and set learning objectives. Students were, on the whole, well-motivated, and all were on task for the time observed. Two teachers are assigned to each group, teaching to their subject strengths and specialisms. Staff use proformas for scientific investigations for students with weaker language skills.

Criteria for assessment of work are reproduced clearly onto feedback forms for students, with those to be addressed in each experiment clearly itemised. The requirements for GNVQ and GSCE are clearly indicated for respective students. Evidence sheets are provided for students to shade in/tick off, so that all students can monitor effectively their progress.

6.5 Student portfolios

On the portfolio evidence seen, student work had been annotated clearly, providing both summative and formative assessment. Students of differing abilities had made good use of Internet and other resources and work was well organised and presented. One of the students had written in depth on contemporary methods of microscopical analysis.

6.6 Student interviews

Four students were interviewed (in pairs) on a one-to-one basis: two from Year 11 and two from Year 10. Another sixteen students were asked questions during the course of their science lessons. All students were responsive and knowledgeable. All interviewees had seen a marked change in teaching styles from Key Stage 3 to 4.

There were a wide range of perceptions about the course.

The practical component of GNVQ/GCSE was seen as a positive aspect of the course by even the most negative of the students. One year 11 student, a strong mathematician, favoured the examination style, ‘perform well on the day’, type of assessment. Another student was very positive on the ‘student-centred’ learning approach and the ability to work at one’s own pace. Yet another thought it was possible to ‘understand and learn more’ in science when learning ‘GNVQ style’, while another student thought this approach was not conducive to learning if those around her were not working.

Some students may have had preconceived ideas. One Year 11 student, interviewed in class, and undertaking an AS Chemistry ‘transition’ course, enjoyed GNVQ but questioned its relevance for her, as an ‘academic’ student. When discussing what she had been learning in her Forensic Science unit, however, she realised and readily acknowledged how the Distinction level material studied on chromatographic techniques was standing her in good stead for her AS Level Chemistry.
6.7 Comparability with other schools

The School has undergone a number of changes in the past four years. Its results have improved significantly across the board. The Headteacher and Governors have undoubtedly acted with vision and with students’ academic interests in mind.

Student performance at the School in Key Stage 3 Science prior to entry to the GNVQ, is comparable to that at the City Technology College, Kingshurst, in that 73 per cent of students achieve Level 5 and above. Kingshurst, has achieved undeniable success with GNVQ. At Key Stage 4, if GNVQs are not considered, the percentage of students gaining five or more GCSEs at Kingshurst falls from 97 per cent to 50 per cent (Kingshurst Curriculum Advisory Committee, 2003). This is also comparable with the School’s published results at GCSE.

This could be seen to support the School’s decision to undertake Intermediate GNVQ.

The governors have committed funding for IT to support the course.

It is known that other centres have adopted an approach similar to that for the School’s Year 10, ie the delivery of additional material for students to achieve a GCSE Science qualification.

At the School, the Headteacher, governors and teaching staff have worked with concerned parents and students to develop a comprehensive programme of study with excellent breadth and content, which should more than adequately prepare students to maximise their potential in public examinations, and for a career in science.

The small numbers of students requiring GCSE Science at the School, and the range of abilities covered, would seem to preclude the provision of this qualification to students in a separate GCSE set. More importantly, with the careful implementation of this programme, it would appear to be unnecessary.

The Head of Science and the school science team appear to be appropriately qualified, highly motivated, dedicated professionals. They have produced an imaginative and comprehensive treatise of course material for staff training, of an exemplary and publishable standard. In this document, the team has defined and standardised subject content across all levels and the content is cross referenced to subject criteria. They communicate well with, and pass their enthusiasm on to, the students, as observed in the teaching.
7. Conclusions

7.1 The qualifications

GCSE remains the most common qualification at Key Stage 4, but an increasing number of students across the country are taking GNVQ and other vocational qualifications (QCA 2002).

7.2 The School

In its School Improvement Plan, 2003, the School sets out its objectives as the delivery of a curriculum which ‘challenges all learners… provides opportunities to learn in different ways’, and ‘uses modern technology effectively and appropriately’. – the School achieves these objectives.

The change to Intermediate GNVQ in Science was implemented with the appropriate consultation with parents, students, and governors. Minutes were adequately and appropriately recorded.

The School, in common with several other centres across the country, has made extra provision for students wishing to take the GCSE examination, prior to continuing their science studies to A Level, and to degree level.

The implementation of AS Level Science for the current Year 11 students is a truly innovative approach: not only does it bridge differences between GNVQ and GCSE specifications, it also enables students to achieve AS Level ahead of their peers in other schools.

The Headteacher, governors, Head of Science and science team have undoubtedly acted with students’ academic interests in mind. It could be considered that progression opportunities for students could be enhanced if other centres adopted the innovative approach of the School.

7.3 The specific parents’ and students’ concerns

*The number of GCSEs’ that a qualification is ‘worth’*

A ‘Single Award’ in Science means that the material covered takes up ten per cent of the school curriculum; a ‘Double Award’ takes up 20 per cent. There is rarely time for schools to offer ‘Triple Award’ Science within the school curriculum, unless it is supplemented with extra-curricular time.

So why do students need to have extra lessons, if the GNVQ is ‘worth more’?

The GNVQ specification covers aspects of science in much greater depth than its GCSE counterparts. There is a plethora of GCSE Science qualifications, each with slightly different content. This number has been added to in the academic year 2003-04, which has seen the introduction of Single Award ‘Syllabus D’ and Double Award ‘Twenty-first Century Science’. There is therefore limited consistency in the content and approach of the GCSE. Moreover, part of the GCSE curriculum time is devoted to ‘coaching’ to prepare students for public examinations, and many schools effectively re-teach the course in a mere six to eight weeks prior to the external examination.
Allocation of time between ‘taught/academic’ and ‘practical/vocational’ activities

The GNVQ allocates 33 per cent of the time to the knowledge and understanding that is tested in the examination, and 67 per cent of the time to the application and evaluation of knowledge, the understanding of concepts, and to practical work that allows comparison with industrial processes. Students of Intermediate GNVQ are not constrained by level of scientific content, allowing the most able to perform to A Level standard in portfolio work.

The GCSE allocates 80 per cent of the time to ‘taught’ concepts and 20 per cent of the time to a small number of assessed practicals, with no reference to how these techniques are used in the workplace. In addition, almost every school has a set repertoire of these practicals, in which students are so well versed as to almost negate the development of true scientific skills, knowledge and understanding and the evaluation of scientific methodology.

These are some of the very skills deficient in students entering higher education, but those which GNVQ has sought to inculcate in students.

Preparation for GCSE and A Level

Those students who claim to be learning nothing useful in GNVQ that will prepare them for GCSE or A Level should accept the assurance that what they are being ‘taught’ is highly relevant. It is their choice as to whether they participate, and ‘learn’ through their participation – both in the GNVQ sessions, and in the GCSE ones. It is evident from the teaching observation, the students’ portfolios and the student interviews that they are being given the opportunity to do so by a dedicated and professional team of teachers. As parents and students have commented – time is of the essence: students need to put their concerns behind them, and dedicate themselves to their studies.

The national picture

Most schools who have opted for the GNVQ do not consider it necessary to offer additional coaching for GCSEs. Parents who wished their children to undertake GCSE would have no choice but to seek alternatives elsewhere – either by placing their child in another school, or by paying for private tuition.

A number of schools have adopted the approach taken by the School, and offer additional coaching – at lunchtime, in ‘enrichment’ time, and in twilight sessions – for those students who wish to take additional qualifications. Indeed, the School has offered this facility for Triple Award Science for the last 10 years.

The School has pointed out that the additional homework, lunchtime and twilight sessions should be well within the capability of the students, and represent no more than would be expected of dedicated, GCSE entrants.

It is outside the scope of this report to comment on the choices students have to make between their studies and their sporting or musical interests.

Ideally, every student should be offered an individual learning programme, and with its various provisions offered in its innovative approach to science, the School has come closer than most schools in achieving this goal.
Glossary

AQA
Awarding body (examination board)

BMAT
Biomedical Admissions Test

CTC
City Technology College

DfES
Department for Education and Skills

Edexcel
Awarding body

FE
Further Education

GCSE
General Certificate of Secondary Education

GNVQ
General National Vocational Qualification

HE
Higher Education

ICT
Information and communications technology

INSET
In service training days

Key Stage 4
Ages 14-16

OCR
Awarding body (examination board)

QCA
Qualifications and Curriculum Authority
(Government regulatory body)
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