



**Higher National Qualifications 2011
Internal Assessment Report
Biology**

The purpose of this report is to provide feedback to centres on verification in Higher National and Scottish Vocational Qualifications in this subject.

Higher National Units

General comments

Most centres have a clear understanding of the national standards and aim to implement them.

Unit specifications, instruments of assessment and exemplification materials

This session, all the centres visited by the Biology team used the exemplars available on SQA's secure website and so it was not possible to confirm whether they were totally familiar with the Unit specifications. Where minor changes to the questions had been made to the assessment papers, they conformed to the requirements of the Units.

Where assessment material was sent to External Verifiers (EVs) for prior moderation, it was found that the assessment instruments from several centres did not conform to the Unit specifications. This suggests that there is a need for some centres to familiarise themselves better with the content of the Unit specifications. Centres are reminded that instruments of assessment should be internally verified before being sent to SQA for prior verification.

Evidence Requirements

In general, the Evidence Requirements are well understood but problems do occur when 'sampling of topics' is necessary in the preparation of assessment questions. The required number of bullet points to be assessed is, on occasion, not completely followed. For example, in Unit DJ1K 34 Cell Biology: Theory and Practice, a practical Outcome requires a variety of animal and plant cells to be examined but a centre would fail to meet the requirement to test both types of cell if it only covers one type.

Administration of assessments

The use of exemplars has ensured that the assessments are assessed at the same level nationally, but it is noted that re-assessments are, on occasion, not set at the same standard and are often easier to achieve. Centres need to be encouraged to devise and use alternative assessment instruments as the exemplars have been used continuously for several years now and it would be better to have some variation in assessment materials. Sharing assessment instruments between colleges would help with this issue and is to be encouraged.

Centres also need to ensure that all assessments take place under closed-book conditions, unless stated to be 'open book' or an assignment/project.

The use of half marks for answers has been noted at some centres and should be avoided.

It was noted that various colleges are still allowing candidates to remediate when they fail to meet the 60% pass mark. There is a need to emphasise that the current HN system does not allow for remediation on a set assessment paper but requires a completely different re-assessment test to be set with a pass cut-off score of 60%. Also there have been instances where a department has used the same assessment paper for a resit. This is not acceptable because a completely different test should be given.

Minor discrepancies in marking and errors in student answers have also been noted on verification visits.

Internal verification is carried out routinely following college guidelines at all centres, but at times it is not always thorough enough and in a few instances is not carried out by a subject specialist — which is unacceptable. One centre uses a three year cycle for internal verification where selected Outcomes of every Unit are internally verified every year.

Cross-marking and recording of marks were being carried out routinely on assessment samples at all the centres verified this session.

General feedback

In the three centres visited, where a total of five different HN Units were externally verified, the standard of work being achieved by candidate passes was of an acceptable level.

Tutor feedback to candidates during the Unit delivery was recorded and was generally detailed and clear at all the centres visited.

Only one candidate was interviewed at a centre and frequency of assessment contact, marking decisions, support and guidance were discussed. On all issues the student made positive comments on the input, feedback on progress, and support of the tutors.

Learning support facilities were available at all three centres verified this session with scribes and readers available, and personal training time allocated where needed.

Areas of good practice

Many instances of good practice have been noted.

- ◆ One centre gave candidates the opportunity to use formative assessments for self-assessment throughout delivery of Unit DJ1K 34 Cell Biology: Theory and Practice.
- ◆ Integration of Units, where possible, was noted. For example, Unit DJ1K 34 Cell Biology: Theory and Practice integrated with DH55 34 Microbiology: Theory and Practice.
- ◆ The use of a questionnaire for 'Evaluation of Learning and Teaching' at the end of the course. Candidates and teaching staff discuss and evaluate the learning and teaching experience so that improvements can be made to Unit delivery and any problems addressed.
- ◆ The use of Moodle to widen access for students to resources and reference materials. In one centre it was used by the centre to provide teaching materials for learning support candidates.
- ◆ Laboratories were equipped with moveable desks to help candidates who needed learning support.
- ◆ In Unit DP9M 34 Science Industry: Key Issues, students were divided into small groups to research and discuss chosen topics. This helped the candidates later when developing their individual presentations.

Specific areas for improvement

- ◆ Record keeping of assessments could be improved as details of results are not now being recorded by most centres. Records of failed first attempts are not being shown and only the final Pass or Fail is being recorded.

Higher National Graded Units

Titles/levels of HN Graded Units verified

HN Applied Sciences: Graded Unit 1

HN Applied Sciences: Graded Unit 2

General comments

Centres have a clear and accurate understanding of the national standards and aim to put these into practice.

Unit specifications, instruments of assessment and exemplification materials

The four centres visited for Graded Units 1 and 2 were familiar with the Unit specifications and were using the exemplar checklists prepared by SQA for assessing and marking candidate scripts.

Evidence Requirements

One centre was finding certain items in the marking checklist ambiguous and sought advice from the visiting EV.

The Evaluation Section in Graded Unit 2 is frequently misunderstood by both assessors and candidates. Where 'strengths and weaknesses of the output' need to be stated in the report, they should refer to evaluating the project and report and not to personal strengths and weaknesses of the candidate. The purpose of evaluation was misunderstood in some centres and needs to be clarified to candidates.

Administration of assessments

One centre was visited for Graded Unit 1 and three verified for Graded Unit 2. All the centres were administering assessments and using the prescribed checklists for marking in accordance with SQA's Unit specifications.

The Biology EVs have noted that there is a great variation in the quality of Graded Unit awards from centre to centre. Many Grade A passes are not of the same standard because the marking schemes being used allow candidates to achieve the required marks over a wide range.

Assessors were, at times, over generous in their allocation of marks — but the marks being awarded were within the remit of the marking schemes. There is a need, therefore, for centres to apply the grading lists in the Unit specifications more thoroughly.

Centres need to ensure that the choice of project topics and the level of detail for both practicals and report writing for Graded Unit 2 are appropriate for a level 8 Unit.

Some centres visited had good cross-referencing of the mark allocations on the candidate scripts, and on individual candidate checklists, which greatly aided both internal and external verification. It is essential that all scripts are annotated to show where the individual marks are being allocated. This was not done in two of the colleges visited for Graded Unit 2.

Judgement of candidate performance was generally fair but some inconsistencies in mark allocations were noted in a few cases where candidates were awarded different marks for the same amount of information or where marks were awarded twice for the same facts.

Records of internal verification were not available at the time of an external verification visit at one centre, although verbal assurance was given that standardisation of assessment decisions had taken place but needed to be recorded.

Cross-marking was being carried out by the Internal Verifiers on a sample of scripts at most centres when the projects and reports were complete. Where two candidate groups had different assessors, all the assessment papers were cross-marked by both assessors to ensure standardisation of grades.

General feedback

No candidates were interviewed during EV visits but feedback by assessors to candidates was clear and timely when given. Assessors are reminded to keep records of the help and advice given to candidates as work progresses through the Unit.

A 'Quality and Equality of Learning and Teaching Materials' checklist was available and completed at one centre, and all centres visited had facilities in place for students with learning difficulties. Additional assessment arrangements are provided by using readers, scribes and assessment materials in alternative formats when needed. In one case, a foreign student was granted extra time to complete their report because of language difficulties.

An item in the Development stage of the Graded Unit 2 marking checklist — 'Demonstrates appropriate use of one or more types of instrumentation/equipment to a complex level and a high standard' — is not always easy to be fulfilled in any practical work chosen by the candidate. It depends on the choice of project, but also cannot always be fulfilled because centres may not have suitable or sufficient items of equipment. Assessors need to advise candidates about this item.

Areas of good practice

- ◆ Candidate investigation brief provided with guidelines for candidates on report writing and referencing.
- ◆ Student checklist version of SQA's checklist provided to candidates to help them structure their project /reports.
- ◆ PowerPoint presentation outlining the content of each stage of the Graded Units.
- ◆ Candidates starting work on the Graded Units in Semester 1.
- ◆ Choice of topics for research/practicals which were not too demanding in terms of time and resources and which were of personal interest to the candidate for Graded Unit 1.
- ◆ A wide variety of different topics chosen for Graded Unit 2 using a range of analytical techniques.
- ◆ Photographic records of experimental evidence included in some reports for Graded Unit 2 which was most helpful for external verification.
- ◆ Some projects incorporated the use of IT for the conversion of raw data into tabular graphical form for Graded Unit 2.

- ◆ One centre supplied science notebooks for Graded Unit 2 for recording all data and workings, etc — so providing a log of candidate work that was then available for external verification.
- ◆ Quality improvement meetings held during the session for members of staff assessing the Unit to ensure standardisation of assessment decisions.
- ◆ Cross-marking a sample of assessment reports and projects by the Internal Verifier.
- ◆ Excellent signposting of marks allocated on assessment scripts to items on the SQA marking checklist. One centre used different coloured pens to match mark allocations on assessment scripts and checklists which greatly aided internal and external verification.

Specific areas for improvement

- ◆ Candidates need to be advised about the Evaluation stage and its purpose.
- ◆ Mark allocations on the assessment scripts and checklists should be signposted. This was not carried out by some centres.
- ◆ Candidates should be advised about scientific referencing.
- ◆ Plagiarism advice is needed to ensure that reports are written in the candidates' own words.