



# **National Qualifications Review Investigation Report**

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***Craft and Design  
August 2003***



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# Executive summary

This report is the outcome of an investigation into how to implement the agreed actions, which were detailed in the Craft and Design Subject Review Report, published in May 2002.

The main concerns identified in the Review of Craft and Design were:

- ◆ the structure of the Course (two x 40-hour Units and two x 20-hour Units) is causing problems with delivery and assessment
- ◆ the volume and complexity of internal assessment
- ◆ the volume and complexity of external assessment
- ◆ the title of the Course
- ◆ lack of clarity on the purpose and focus of the Course, including the possible overlap between Craft and Design and Practical Craft Skills
- ◆ the amount of content in the Course
- ◆ progression from Standard Grade

The consultation process, carried out between January and March 2003, involved:

- ◆ semi-structured telephone interviews with selected centres
- ◆ posting the interview questionnaire on SQA's website
- ◆ a meeting of the Craft and Design Subject Advisory Group
- ◆ two meetings of a working group
- ◆ interviews with candidates
- ◆ meetings with higher education, further education, teacher training representatives and groups of teachers
- ◆ two meetings of the Subject Assessment Panel

The responses to the consultation indicated that:

- ◆ The Course title is inappropriate.
- ◆ The introduction of Practical Craft Skills had provided an alternative route for candidates. This alternative practical route has clarified the design focus of Craft and Design – no action is necessary at present.
- ◆ Respondents were generally happy with Standard Grade Craft and Design. Some centres have changed the delivery of Standard Grade to make it easier for candidates to progress to the NQ Courses – minor changes will be made, but these are outside the scope of the NQ Review.
- ◆ Respondents feel that Courses in Craft and Design and Practical Craft Skills meet the needs of different types of candidates, and extension of both Courses to further levels would be helpful.
- ◆ The amount of content in the Courses was not a major issue – no action is necessary at present.
- ◆ The Course Units do not fit together well. This has resulted in centres re-organising the Unit content to make delivery of the Course more efficient.
- ◆ Internal assessment is no longer a major issue due to changes already made by SQA to reduce the volume of assessment.
- ◆ The main concern with external assessment is the design assignment that is used to assess design ability.

The following recommendations are made in this report:

- ◆ A title which reflects the content of the Course should be chosen.
- ◆ The Course structure should be based on three mandatory Units at Intermediate 2 and Higher. No changes are planned for the Advanced Higher.
- ◆ The need for Courses at additional levels in Craft and Design and Practical Craft Skills should be monitored in the light of the impact of changes to the existing Courses, and the impact of any future changes in the use of Standard Grade. If a business case can be made, the following new clusters/Courses could be developed:
  - Access and Intermediate 1 Craft and Design
  - Access Practical Craft Skills
  - Higher Practical Craft Skills: Woodworking Skills
- ◆ The design assignment should be modified. Design ability should be assessed with a shorter and more controlled coursework assignment. The weighting of marks awarded to design ability should be reduced from 60% to reflect the balance of knowledge, understanding and skills of the new Courses. Further development work will determine the exact weighting.

# 1 Terms of reference

The Scottish Executive initiated a review of all National Courses in June 2001 with the purpose of considering how best to reduce the complexity, variety and total volume of assessment in each subject. Following the review process, Subject Review Reports were published between February and June 2002. The reports identified actions to be taken forward for each subject. These agreed actions received Ministerial approval.

This report is the result of an investigation into the best ways of addressing issues and implementing actions specified in the Craft and Design Subject Review Report.

The issues to be addressed and the agreed actions to be met were:

## 1.1 Course title and rationale

The title of the Course may not reflect the Course content.

### **Agreed action:**

Investigate the appropriateness of the Course title in relationship to the Course content.

## 1.2 Focus and purpose of the Course

There are conflicting opinions about the balance of ‘craft’ and ‘design’ activities in NQ Craft and Design Courses. It was felt that current Courses are heavily biased towards design. The nature and inclusion of practical work within Craft and Design is therefore a major issue.

### **Agreed action:**

Investigate the balance of ‘craft’ and ‘design’ activities.

## 1.3 Progression from Standard Grade

It is felt that there is no clear progression between Standard Grade and National Courses.

### **Agreed action:**

Investigate the progression between Standard Grade and the NQ Courses.

## 1.4 Relationship between Courses in Craft and Design and Practical Craft Skills

Many technical education departments offer Intermediate 1 & 2 Courses in Practical Craft Skills. There are two Courses at each level — Woodworking Skills and Engineering Skills. There have been proposals to introduce Higher Courses in Practical Craft Skills. This has highlighted issues about the focus of the two Courses and possible overlap between them.

### **Agreed action:**

Investigate the relationship between Courses in Craft and Design and Practical Craft Skills and the demand for Higher Courses in Practical Craft Skills.

## **1.5 Amount of content in the Intermediate 2 and Higher Courses**

There is concern that there is too much content in the Courses and that the Unit product *Evaluation and Graphic Techniques* could be removed as the knowledge and skills are implicit in other Units of the Course.

### **Agreed action:**

Investigate the amount of content at Intermediate 2 and Higher and the relationship between Units.

## **1.6 Use of 20-hour Units**

The Courses include two 20-hour Units at each level, which add to the internal Unit assessment burden.

### **Agreed action:**

Remove the 20-hour Units and replace with a 40-hour Unit.

## **1.7 Volume of internal assessment**

There has been concern over the volume, duplication and complexity of internal assessment.

### **Agreed action:**

Action to reduce the volume, duplication and complexity of internal assessment was taken for session 2002 - 3.

## **1.8 Volume and balance of external assessment**

There is concern over the volume of external assessment. In particular, the design assignment used to assess design ability is a burden on candidates and staff and its reliability as an assessment instrument is questionable.

### **Agreed action:**

Investigate alternative models of external assessment.

The full list of actions to address these concerns identified during the Review is given in Appendix 1.

## **2 Methodology**

### **2.1 Semi-structured telephone interviews**

Semi-structured telephone interviews were set up with principal teachers or teachers responsible for Craft and Design. A sample of centres was selected to ensure that responses would be representative of all areas in Scotland. Centres were selected on the following criteria: size of school roll; subjects presented; number of entries for Craft and Design; and location. The interview schedule, and background papers giving information on current Courses and progression routes, Unit models, and assessment models were e-mailed to each respondent prior to the interview.

55 telephone interviews were conducted.

Principal Teachers were encouraged to discuss issues with colleagues before the telephone interview. Responses to open questions were discussed to reduce ambiguity and provide in-depth qualitative answers. Closed questions were used to gather quantitative data that could be numerically analysed.

### **2.2 Questionnaires on web**

The interview schedule and background papers used for the telephone interviews were posted on the SQA website, and SQA Co-ordinators and principal teachers/teachers of Craft and Design were told about it by letter. A notice was also posted on the SmartGroup websites for Craft and Design and Practical Craft Skills.

36 completed questionnaires were returned.

### **2.3 Candidate interviews**

63 candidates were interviewed in four groups in three schools (see Appendix 3). The groups were made up of male and female candidates. There were candidates for both Craft and Design and Practical Craft Skills, at both Higher and Advanced Higher.

### **2.4 Craft and Design working group**

A working group was set up to advise on the consultation. Group members are practising teachers who are involved with SQA procedures for Craft and Design (ie Principal Assessors, Vectors, etc). They represent schools from across Scotland.

The group first met in November 2002 to discuss the issues that the consultation should address (see Appendix 3). The second meeting in March 2003 focused on: preliminary feedback; conclusions; and proposals arising from the consultation.

### **2.5 Craft and Design Subject Advisory Group**

A Subject Advisory Group was set up to provide advice on all aspects of the review. The membership of this group includes representatives from schools, further education, higher Education, and Learning and Teaching Scotland. The first meeting, in March 2003, focused on: preliminary feedback from consultation, conclusions and proposals (see Appendix 3). The group was asked to comment on the fitness for purpose and practicality of the proposed Unit and assessment models.

## **2.6 Technical Education Assessment Panel**

The review of National Courses in Craft and Design has been discussed at two Technical Education Assessment Panels (see Appendix 3).

## **2.7 Meetings with teachers/principal teachers**

A group consultation took place at a Curriculum Panel Meeting in one education authority (see Appendix 3). After the group was briefed on the preliminary findings of the consultation, they provided further feedback on areas where there were unresolved issues.

A presentation was given to a group of Craft and Design teachers in a second education authority. Discussion of the proposed models followed (see Appendix 3).

## **2.8 Meetings with representatives from higher education, further education and teacher training**

Meetings took place with representatives from higher education, further education, and teacher training (see Appendix 3 for summaries of comments). Representatives of these groups were invited to attend Subject Advisory Group and working group meetings.

## 3 Findings and conclusions

### 3.1a Course title: findings

- ◆ The majority of responses from all stages of consultation indicated that Craft and Design was not an appropriate title for the Course.
- ◆ A large number of alternative titles were suggested by respondents. ‘Product Design’ was by far the most popular.
- ◆ Several respondents felt that the title ‘Product Design’ was too restrictive and sounded vocational. This view was supported by respondents interviewed later in the consultation process.
- ◆ Candidates felt strongly that the title was misleading. Several indicated that they would not have taken the Course if it were called ‘Product Design’.
- ◆ FE and HE staff felt that the title ‘Product Design’ did not adequately describe the Course. They felt ‘Three-Dimensional Design’ more accurately captured the broad aspects of the Course.
- ◆ The Subject Advisory Group, working group, Assessment Panel, and the two groups of teachers consulted, have discussed the Course title at length. There is overwhelming agreement that the title has to be changed, but there is no clear consensus on an alternative title.
- ◆ There is a proliferation of Courses with ‘design’ in their title — 11 Courses in the NQ catalogue have ‘design’ in their title, including Intermediate 2 and Higher ‘Design’. This further highlights the importance of having a title that captures the essence of the Course.

### 3.1b Course title: conclusions

- ◆ There is clear agreement among all stakeholders that the title of the Course is inappropriate and misleading.
- ◆ No suitable alternative title was identified during the consultation.
- ◆ The choice of title is further complicated by the number of Courses with a similar title in the NQ catalogue.

### 3.2a Balance of ‘craft’ and ‘design’ activities: findings

- ◆ A small majority of respondents felt that the balance of ‘craft’ and ‘design’ activities was inappropriate. When questioned, most of the respondents indicated a desire for more time for practical work in the Course, particularly at Intermediate 2. The majority of respondents saw ‘practical’ as meaning modelling, not making fully finished artefacts.
- ◆ There were a variety of opinions on the role of practical work in the Course. Some respondents felt that practical work should contribute to the final grade, but could not suggest how it could be marked. Other respondents felt that practical tasks could be used during the delivery of the Course but should not contribute towards the final grade.
- ◆ There is agreement that practical work is an intrinsic part of designing.
- ◆ Many respondents felt that candidates need to realise their solutions through practical activity.
- ◆ A large number of respondents, including the members of the Advisory Group, said that the manufacturing section of the Course was the element which distinguished it from other design Courses. They felt that candidates should not only be able to design a product but should also have an understanding of how it would be manufactured commercially.

### **3.2b Balance of ‘craft’ and ‘design’ activities: conclusions**

- ◆ The designing in the Course is set in a commercial manufacturing context — this is what makes it different from other ‘design’ courses. Candidates in this Course do not just design in the abstract; they design practical solutions to real problems. The Course should not only develop the candidate’s design skills but should also enhance their knowledge of industrial manufacturing processes and materials. It should also increase their awareness of the economic and social implications of design and manufacture.

### **3.3a Links to Standard Grade Craft and Design: findings**

- ◆ A large majority of respondents felt that the National Courses in Craft and Design did not link well with Standard Grade Craft and Design.
- ◆ Many respondents felt that problems arise from the different nature of the Courses, ie the practical nature of Standard Grade and the design nature of the National Courses. There was some concern over the differences between the assessment of designing in Standard Grade and NQ Courses.
- ◆ Several respondents said that they had altered the delivery of Standard Grade to bring it into line with the National Courses.
- ◆ A large majority of respondents felt that the Standard Grade Craft and Design Course linked well with Practical Craft Skills Courses.
- ◆ The ‘flexibility’ of the Standard Grade allows centres to tailor the delivery of the Course to suit their candidates. However, in many centres the Course has a practical bias, as this is easier to deliver to mixed ability classes. This has resulted in better linkage with Practical Craft Skills than with Craft and Design NQ Courses.
- ◆ Respondents indicated a need for minor changes to Standard Grade Craft and Design – for example, the required knowledge and understanding of tools and processes is outdated.
- ◆ Many respondents indicated a need for Craft and Design NQ Courses at lower levels (Intermediate 1 and Access). Most respondents who suggested this came from centres where NQ Courses are being offered in S3.

### **3.3b Links to Standard Grade Craft and Design: conclusions**

- ◆ Standard Grade Craft and Design received support from respondents due to its flexibility. This allows centres to deliver the Course in a way that suits their candidates. Minor changes are needed (note that this work will be carried out separately from the NQ Review.)

### **3.4a Practical Craft Skills: findings**

- ◆ There has been steady growth in the number of entries in Practical Craft Skills, particularly in Woodworking Skills. Many centres offer Craft and Design and Practical Craft Skills, and a number of candidates do both Courses. Practical Craft Skills is now offered from S3 upwards. A wide range of candidates take the Course for a wide range of reasons: some take the Course for vocational reasons; some S5/S6 candidates take it as fourth or fifth choice because it does not have homework/paperwork; a large number of candidates take it because they like practical work; S3 candidates take/are offered it because they struggle with the design element of Craft and Design.
- ◆ All respondents felt that there was a clear difference between the purpose and focus of Craft and Design and Practical Craft Skills Courses.

- ◆ There was strong support for the introduction of Higher Courses in Practical Craft Skills (Woodworking Skills and Engineering Skills). 64% of all respondents felt that there was a need for Higher Courses. 71% of respondents who currently offered Intermediate 1 and 2 Practical Craft Skills felt that there was a need for Higher Courses. There are several reasons for this:
  - there are a large number of candidates looking for progression in the subject, particularly those who start the Course in S3
  - Practical Craft Skills has the potential to offer a clear alternative route within Craft, Design and Technology (CDT) departments for many candidates
  - respondents feel that candidates with exceptional practical skills should be recognised
- ◆ Some respondents indicated a need for Practical Craft Skills Courses at lower levels. Again, this comment usually came from centres where NQ Courses were being offered in S3.

### **3.4b Practical Craft Skills: conclusion**

- ◆ Practical Craft Skills has been well received by staff and candidates, and there is a strong demand for Higher Practical Craft Skills Courses, and some demand for separate clusters in Woodworking and Engineering Skills at Access level (currently there is one general cluster).

### **3.5a Amount of content at Intermediate 2 and Higher and the relationship between Units: findings**

- ◆ The amount of content was generally not an issue with candidates or staff. The type of content and the amount of assessment were issues.
- ◆ There was concern about repetition of content between Intermediate 2 and Higher.
- ◆ There was mixed response about the type of content. Roughly half of the respondents felt that the content was appropriate. Those who felt it was not appropriate often cited the lack of opportunity to do practical work as the main problem.
- ◆ Many centres integrate the content of the two 20-hour Units with the content of the two 40-hour Units, as this is perceived to be a more efficient way of delivering the Course. However, this leads to problems with gathering assessment evidence.

### **3.5b Amount of content at Intermediate 2 and Higher and the relationship between Units: conclusion**

- ◆ No action is needed on the amount of content. Issues about the type of content should be addressed in the revised Courses.

### **3.6a Course structure: findings**

- ◆ The responses from the telephone and web consultation indicated that the first model presented (with three mandatory 40-hour Units at each level) was the most popular. Many centres already deliver the Course using a model very similar to the model presented because it is the natural way to teach a design-based Course. However, current Unit assessment requirements do not fit well with this delivery model.
- ◆ The Advisory Group, Working Group, Assessment Panel, and the two groups of teachers developed and improved the preferred Course model.

- ◆ At the Subject Review Report stage, there was very little feedback about the Advanced Higher, which has very low uptake – a maximum of 71 candidates in the last two years. Advanced Higher issues were not explored at this stage of the review.

### **3.6b Course structure: conclusions**

- ◆ The Courses at Intermediate 2 and Higher should be revised to include three mandatory Units, covering the following content:
  - A Unit covering problem identification, research and idea generation. It would take candidates through the start of the design process.
  - A Unit covering idea development and modelling. It would take candidates through the rest of the design process culminating in them producing a model of their solution (similar to Unit 4 of the current Course).
  - A Unit covering commercial manufacturing. The content of this Unit would be similar to content of Unit 3 of the current Course. However, its position in the new structure would allow candidates to consider commercial manufacturing in light of the model produced in Unit 2 (or a given model if being done as a stand alone Unit).
- ◆ SQA is currently developing policy and procedures for dealing with Courses with very low uptake. The Advanced Higher in Craft and Design has had a maximum of 71 candidates in its last two years of implementation (see Appendix 6). Its uptake will be monitored in the light of emerging policy on low uptake Courses.

### **3.7a Volume, duplication and complexity of internal assessment: findings**

- ◆ The changes to internal assessment already implemented have been well received by respondents.
- ◆ A large majority of respondents said that the NAB assessments for both knowledge and understanding and designing Outcomes were practicable for staff and candidates.
- ◆ There was criticism of the overlap between internal and external assessment of designing.
- ◆ Many respondents said that they liked the NABs because they were good preparation for the final exam and encouraged them to teach knowledge and understanding during the Course instead of cramming it all in at the end.

### **3.7b Volume, duplication and complexity of internal assessment: conclusion**

- ◆ Internal assessment is no longer a major issue due to changes already made by SQA to reduce the volume of assessment.

### **3.8a External assessment: findings**

- ◆ Respondents were generally happy with the written examination paper.
- ◆ Design ability is currently assessed by a design assignment (contributing 60% of the final grade) which is conducted internally and marked externally (not centrally). This coursework item is the major assessment problem in the Course. It is felt that the design assignment is a big a burden on staff and candidates, and takes too long.
- ◆ Many stakeholders felt that the design assignment is far too prescriptive and reduces creativity. Not all sections of the design assignment actually assess a

candidate's design ability: more their ability to follow the detailed advice given in the design assignment guidance document. It is felt that the front and back ends of the design assignment are not appropriate for the assessment of design ability and simply extend the volume and complexity of assessment. Furthermore, it is felt that these sections are already covered in the written question paper and this therefore leads to duplication of assessment.

- ◆ There were also concerns that the administration of the design assignment varied from centre to centre. Many respondents felt that this method of assessment is not conducted on a level playing field due to the variety of ways it is conducted in centres. The amount and spread of time allocated and level of teacher involvement varies greatly from centre to centre.
- ◆ Many centres start the design assignment at the beginning of the Course. The fact the design assignment contributes 60% of the final grade makes centres focus on it, and it is clear that it has started to drive the Course. This reduces the flexibility of the Course and impacts on the way the Course is delivered in centres leading to complaints of lack of time for other activities (particularly practical work).
- ◆ In spite of the negative comments made about the design assignment, many respondents like it. This is largely because many centres have now built their Course around it. This has led to many of the other problems raised by respondents, such as not enough time, not enough flexibility, complications of assessment, repetition, and lack of appeals evidence.
- ◆ Many respondents like the design assignment as a structure for delivering the Course, but not as an assessment tool.
- ◆ A shorter version of the design assignment (Model A in the consultation) was the preferred method of assessing design ability among respondents to the questionnaire. It received very strong support when it was further developed and explained at the latter stages of the telephone consultation and particularly at the group presentations.

### **3.8b External assessment: conclusions**

- ◆ The external written paper, and its contribution to the final grade (40%), raised very few comments.
- ◆ While there are problems with the current design assignment, an assignment is the preferred method of assessing design ability. It is felt that it is the fairest method for candidates, giving them time to think and reflect and that it is similar to what happens in the 'real world'.
- ◆ A shorter version of the design assignment (Model A) was the preferred model of assessing design ability. The assignment could be based on tasks issued by the SQA and would assess the creative section of designing (idea generation and development). The tasks could be issued during the teaching session and the assignments would be limited to a set number of pages. The marks awarded to it would be reduced from the current 60% of the final grade to better reflect the Course — weighting is likely to be in the range of 40 - 50% of the final grade.

## **4 Recommendations**

### **4.1 Course title**

A title which reflects the content of the Course should be chosen.

### **4.2 Focus of Course and Course structure**

- ◆ The Course structure should be based on three mandatory Units at Intermediate 2 and Higher.
- ◆ Hierarchical Units should be based on the following areas of study:
  - problem identification, research and idea generation
  - idea development and modelling
  - commercial manufacturing techniques and processes
- ◆ No changes will be made to the Advanced Higher. The Course should be monitored in the light of the emerging policy on low uptake Courses.

### **4.3 Links to Standard Grade Craft and Design and Practical Craft Skills**

The need for Courses at additional levels in Craft and Design and Practical Craft Skills should be monitored in the light of the impact of changes to the existing Courses, and the impact of any future changes in the use of Standard Grade. If a business case can be made, the following new clusters/Courses could be developed:

- Access and Intermediate 1 Craft and Design
- Access Practical Craft Skills
- Higher Practical Craft Skills: Woodworking

### **4.4 External assessment**

- ◆ The design assignment should be modified. Design ability should be assessed with a shorter and more controlled coursework assignment based on tasks issued by the SQA during the Course. The weighting of marks awarded to design ability should be reduced from 60% to reflect the balance of knowledge, understanding and skills of the new Courses. Further development work will determine the exact weighting. Design ability should be assessed by an assignment. Assignments should be limited by the detail of the assessment criteria and the volume of evidence to be submitted.
- ◆ The preferred option is for the assignment to be centrally marked to establish the national standard and to improve standardisation of marking, but further work will be required to investigate the practicalities of this model.

No action is needed at present on the amount of Course content or the volume of internal assessment.

# Appendices

- Appendix 1: Agreed actions from the Subject Review Report
- Appendix 2: Summary of responses to questionnaire
- Appendix 3: Summary of responses from key stakeholders:
  - Interviews with candidates
  - Feedback from working group
  - Feedback from Subject Advisory Group
  - Feedback from Technical Education Assessment Panel
  - Feedback from meetings with groups of teachers
  - Feedback from a university lecturer
  - Feedback from college lecturers
- Appendix 4: Proposed Course structures
- Appendix 5: Assessment rationale
- Appendix 6: Uptake figures for the past three years

# Appendix 1: Agreed actions of the Subject Review Report

## Actions for session 2001 - 2002

- 1. Visiting Examining at Advanced Higher**  
Remove the Visiting Examination and the 50 marks that it contributes to the external assessment of Advanced Higher *Craft and Design*. The examination paper and extended case study coursework will be unaffected, as will the 100 and 150 marks that they respectively contribute to the external assessment (see section 2.4).

## Actions to begin in 2002-2003

- 2. Revise design assignment arrangements at Intermediate 2 and Higher**  
SQA will issue an annual list of topics for design assignments at Intermediate 2 and Higher to address emerging coursework irregularities. The design assignment assessment criteria should also be revised to improve consistency and integrity and remove duplication. Internally-assessed Unit work and externally-assessed Course work should be distinct and appropriately levelled. In particular, the direct link between the *Product Model* Unit and the design assignment should be removed (see sections 2.1 and 2.2). This will be implemented for session 2002 - 2003.
- 3. Reduce volume of internal assessment**  
Reduce the volume of Unit assessment in Craft and Design Courses. This process will take place in two stages. The first stage will be a scoping exercise, which will investigate whether there are straightforward and short-term ways to reduce the assessment burden — this will be implemented for session 2002 - 2003. The second stage will be part of the revisions proposed below (see section 2.3).
- 4. Revision of Courses in Craft and Design**  
Revise the content, structure and assessment of Courses in Craft and Design. In revising the Courses, the following factors will be considered:
  - ◆ Course title and rationale
  - ◆ focus and purpose of the Course (in particular whether the primary focus of this Course is product design)
  - ◆ progression from Standard Grade
  - ◆ relationship between Courses in Craft and Design and Practical Craft Skills
  - ◆ amount of content in the Intermediate 2 and Higher Courses
  - ◆ use of 20-hour Units
  - ◆ volume of internal assessment
  - ◆ volume and balance of external assessment

The revisions will be implemented as soon as practicable for centres and SQA.

## Mid–long term actions

None.

*\* It should be noted that the revision of Craft and Design Courses also includes (from the NQ Review of Practical Craft Skills Courses) a requirement to look at whether there is a demand for Higher Woodworking Skill and Engineering Craft Skills Courses to provide progression from the current Intermediate 2 Courses.*

## Appendix 2: Summary of responses to questionnaire

### Response rate

290 centres presented Higher Craft and Design in the session 2001 - 2002. 55 telephone interviews were conducted with teachers of Craft and Design/principal teachers and 36 website questionnaires were returned.

- ◆ 39% of centres offering Higher Craft and Design have been consulted via interviews, questionnaires and meetings.

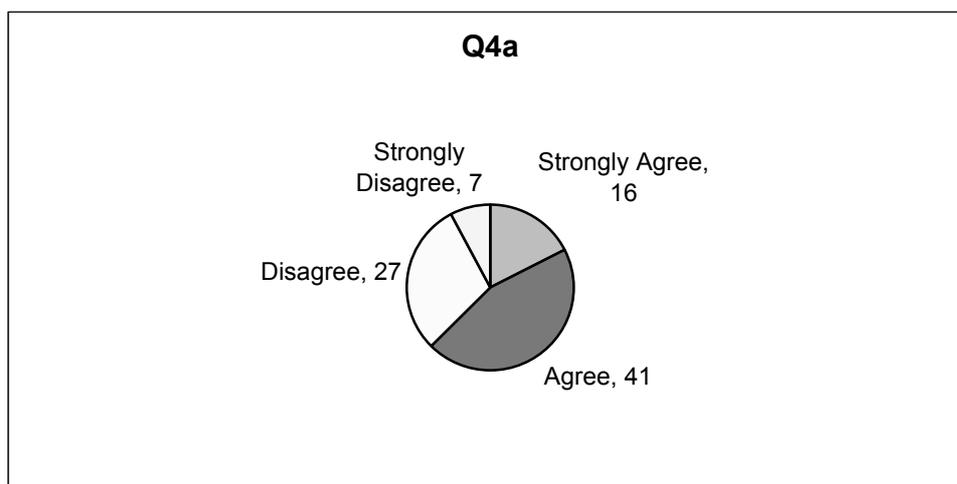
### Summary of responses

For each question/statement in the questionnaire the number and percentage of responses in each category are displayed in the tables and pie charts below. A sample of typical comments is given.

- 4a) The current Craft and Design framework of Courses (including PCS) provides sufficient progression routes.

Response	No of responses	%
Strongly Agree	16	18
Agree	41	44
Disagree	27	30
Strongly Disagree	7	8
Total	91	100

- ◆ 62% agree/strongly agree
- ◆ 38% disagree/strongly disagree



### Comments:

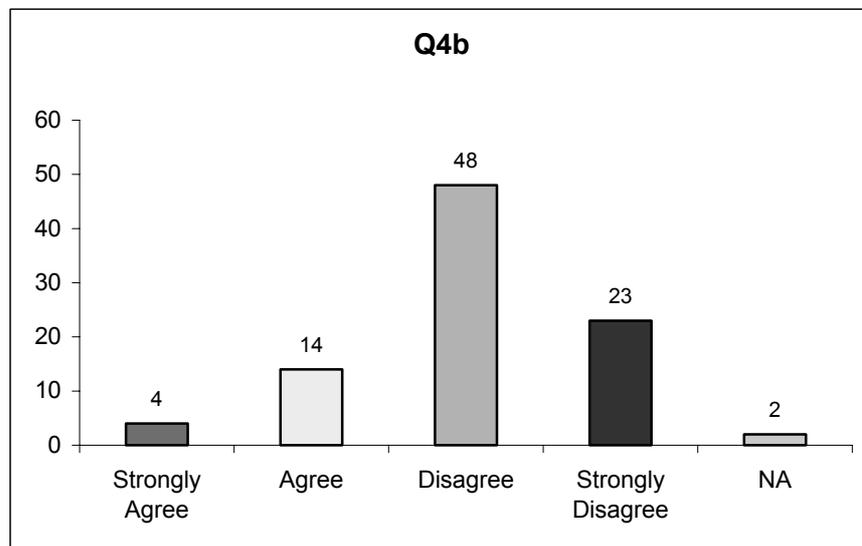
- ◆ Intermediate 2/Higher Craft and Design is too repetitive
- ◆ Foundation Craft and Design candidates can progress to Practical Craft Skills Courses
- ◆ Standard Grade does not prepare candidates well for NQ Courses
- ◆ there is a lack of provision for Foundation candidates

- ◆ there is lack of progression in Practical Craft Skills

4b) All levels of Standard Grade Craft & Design provide candidates with the necessary skills and knowledge to progress to Intermediate 2 or Higher Craft & Design.

Response	No of responses	%
Strongly Agree	4	4
Agree	14	15
Disagree	48	54
Strongly Disagree	23	25
NA	2	2
Total	91	100

- ◆ 19% agree/strongly agree
- ◆ 79% disagree/strongly disagree



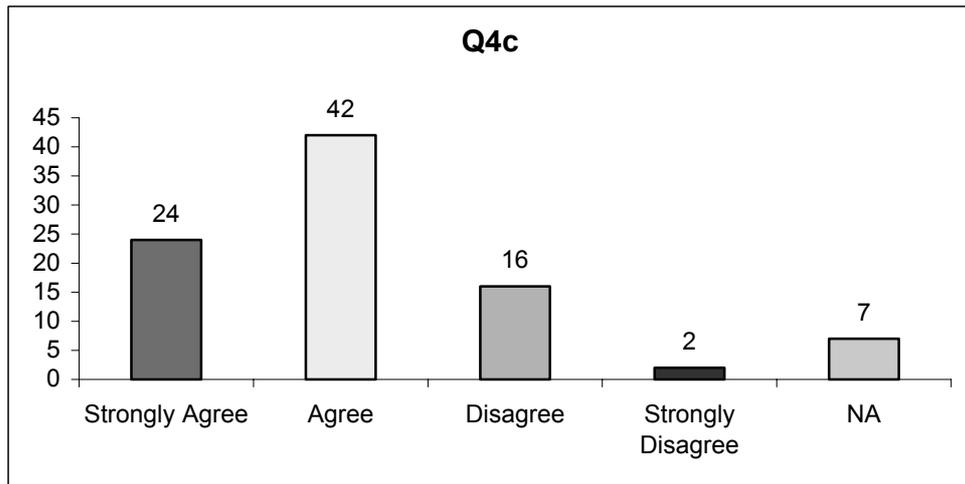
**Comments:**

- ◆ Centre is changing Standard Grade Course to prepare better for NQ Courses
- ◆ Candidates (especially Foundation) are not prepared for design element of the NQ Courses
- ◆ Too much knowledge of tools and materials in Standard Grade
- ◆ Need for more craft in NQ Courses

4c) All levels of Standard Grade Craft & Design provide candidates with the necessary skills and knowledge to progress to Intermediate 1 or Intermediate 2 Practical Craft Skills.

Response	No of responses	%
Strongly Agree	24	26
Agree	42	46
Disagree	16	18
Strongly Disagree	2	2
NA	7	8
Total	91	100

- ◆ 72% agree/strongly agree
- ◆ 20% disagree/strongly disagree



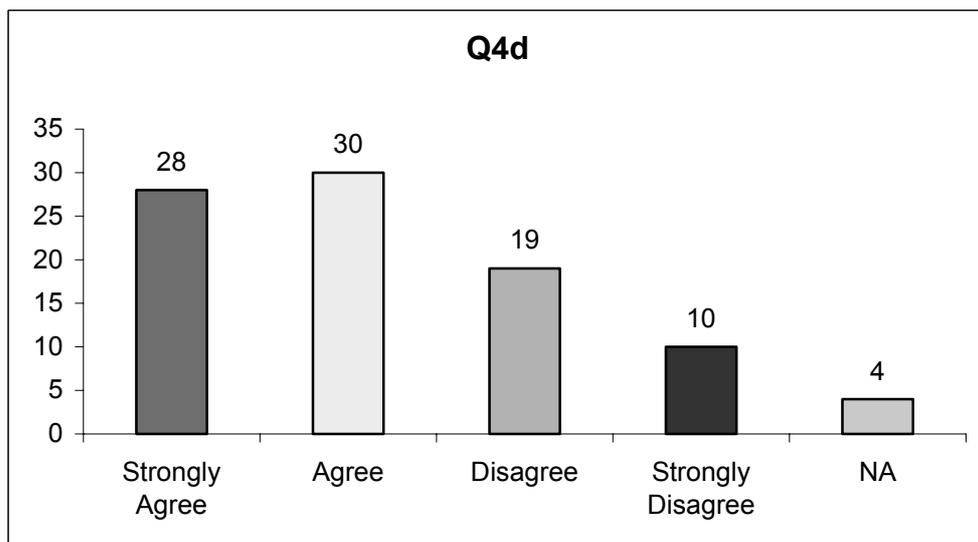
**Comments:**

- ◆ want practical focus to remain in Standard Grade
- ◆ would want Access Practical Craft Skills clusters if Standard Grade were discontinued
- ◆ Practical Craft Skills does not require an introduction

4d) There is a need to develop Higher Courses to offer progression from Intermediate Practical Craft Skills Courses.

Response	No of responses	%
Strongly Agree	28	31
Agree	30	33
Disagree	19	21
Strongly Disagree	10	11
NA	4	4
Total	91	100

- ◆ 64% agree/strongly agree
- ◆ 32% disagree/strongly disagree



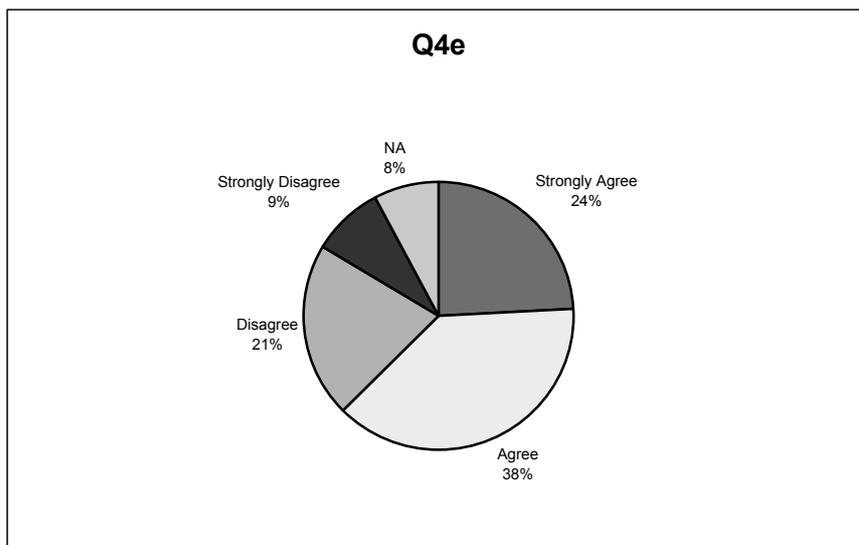
**Comments:**

- ◆ progression needed for non-academic candidates
- ◆ needs to be accepted by FE/HE
- ◆ must not include academic work
- ◆ exceptional skills should be rewarded - vocational Highers are a strength of the new framework
- ◆ there is a demand/market

4e) There is a need to develop additional freestanding Practical Craft Skills Units.

Response	No of responses	%
Strongly Agree	22	24
Agree	35	38
Disagree	19	21
Strongly Disagree	8	9
NA	7	8
Total	91	100

- ◆ 62% agree/strongly agree
- ◆ 30% disagree/strongly disagree



**Comments:**

- ◆ would increase variety/flexibility
- ◆ suitable for S6 candidates
- ◆ Units would allow horizontal progression
- ◆ may be a problem to deliver, too many qualifications

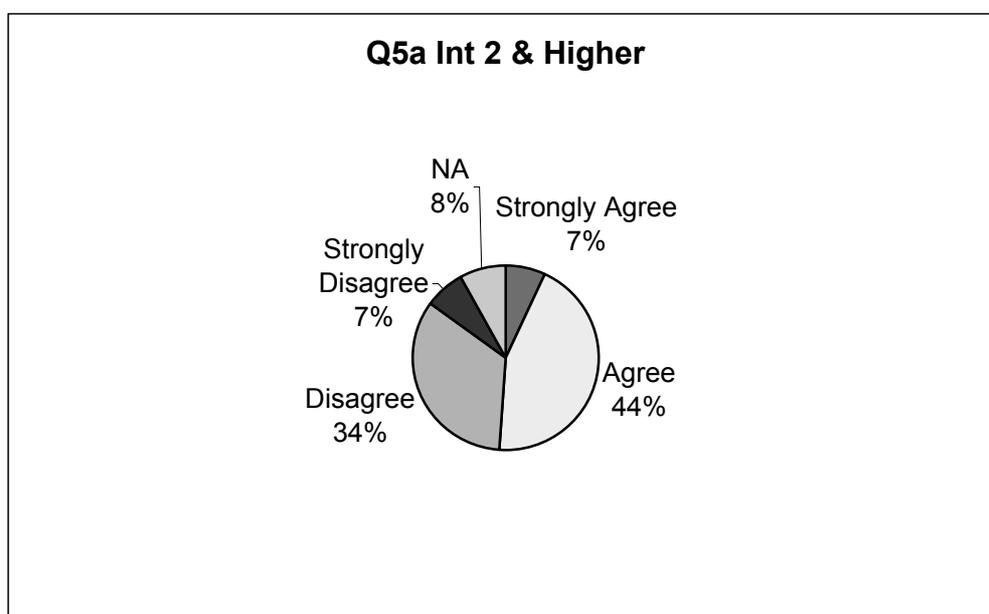
With reference to the current Craft and Design Courses:

5a) The content is appropriate to the needs of candidates.

### Intermediate 2 and Higher

Response	Int 2		Higher		Overall
	No	%	No	%	%
Strongly Agree	3	3	10	11	7
Agree	37	41	44	48	44
Disagree	32	35	29	32	34
Strongly Disagree	8	9	4	4	7
NA	11	12	4	4	8
Total	91	100	91	99	100

- ◆ 51% agree/strongly agree
- ◆ 41% disagree/strongly disagree



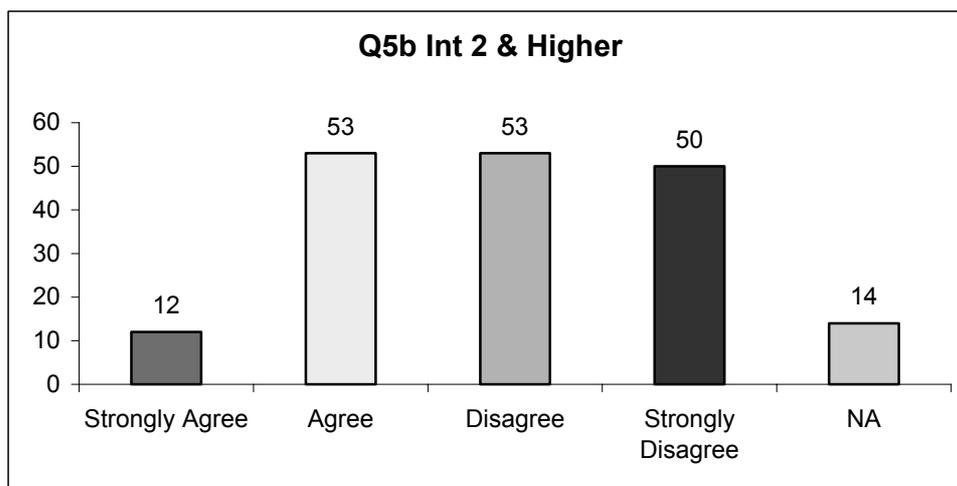
#### Comments:

- ◆ works well at bi-level
- ◆ feedback from candidates/ex-candidates/HE is good
- ◆ there should be more emphasis on modelling
- ◆ design assignment is too long
- ◆ too much repetition between Intermediate 2 and Higher
- ◆ too much design/theory in Intermediate 2 - staff and candidates do not enjoy Course because of lack of practical work

b) The balance between ‘craft’ and the ‘design activities’ is appropriate.

Response	Int 2		Higher		Overall
	No	%	No	%	%
Strongly Agree	6	7	6	7	7
Agree	22	24	31	34	29
Disagree	26	29	27	30	29
Strongly Disagree	27	30	23	25	27
NA	10	11	4	4	8
Total	91	101	91	100	100

- ◆ 36% agree/strongly agree
- ◆ 56% disagree/strongly disagree



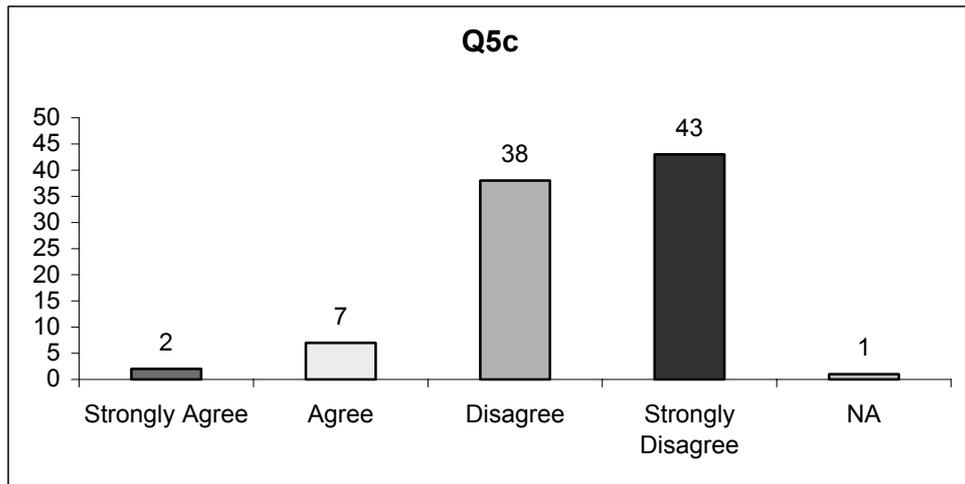
**Comments:**

- ◆ no time for craft, candidates want to make things
- ◆ candidates are aware of content and make an informed choice
- ◆ depends on how the Course is being run by teacher
- ◆ no recognition of craft skills
- ◆ very little time to teach craft skills

c) The title ‘Craft and Design’ accurately reflects the content and focus of the NQ Courses.

Response	No of responses	%
Strongly Agree	2	2
Agree	7	8
Disagree	38	42
Strongly Disagree	43	47
NA	1	1
Total	87	100

- ◆ 10% agree/strongly agree
- ◆ 89% disagree/strongly disagree



**Comments:**

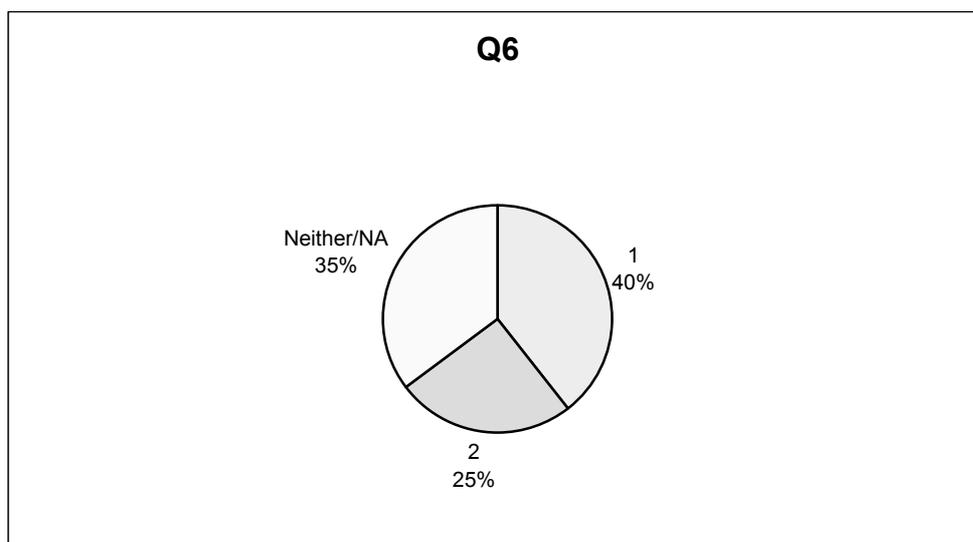
- ◆ name should be the same as Standard Grade
- ◆ reservations about name change – need to avoid a name which is too narrow or vocational
- ◆ title is misleading
- ◆ suggestions for new title:
  - 3D Design
  - Product Design
  - Production Design
  - Design and Realisation
  - Design
  - Theoretical Design
  - Design Studies
  - Design for Manufacture
  - Industrial Design
  - Design and Manufacture
  - Designing for Living
  - Design Technology

With reference to the proposed Unit Models (shown in Appendix 2 of the questionnaire):

6) Which model do you prefer?

Response	No of responses	%
1	36	40
2	23	25
Neither/NA	32	35
Total	87	100

- ◆ 40% prefer Model 1
- ◆ 25% prefer Model 2
- ◆ 35% do not prefer either



**Comments:**

- ◆ marks must be awarded for modelling or no time will be spent on it – suggest 20%
- ◆ Unit Model 1 would work, it is clear, logical and close to what we currently do
- ◆ Unit Model 2 would require a lot of in-service
- ◆ prefer Unit Model 2 as it retains practical element
- ◆ prefer current Course

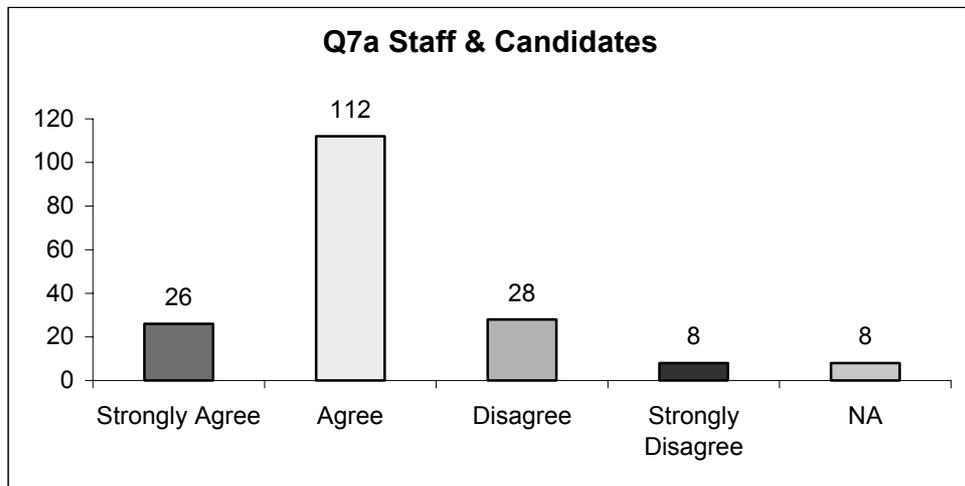
With reference to current NQ Craft and Design Courses and the revised evidence requirements please indicate your response to the following statements:

7a) The 'Knowledge and Understanding' element of the NABs is practicable for staff and candidates.

**Staff and Candidates**

Response	Staff		Candidates		Overall %
	No	%	No	%	
Strongly Agree	14	15	12	13	14
Agree	58	64	54	59	63
Disagree	10	11	18	20	15
Strongly Disagree	5	5	3	3	4
NA	4	4	4	4	4
Total	91	99	91	99	100

- ◆ 79% agree strongly agree
- ◆ 19% disagree strongly disagree



**Comments:**

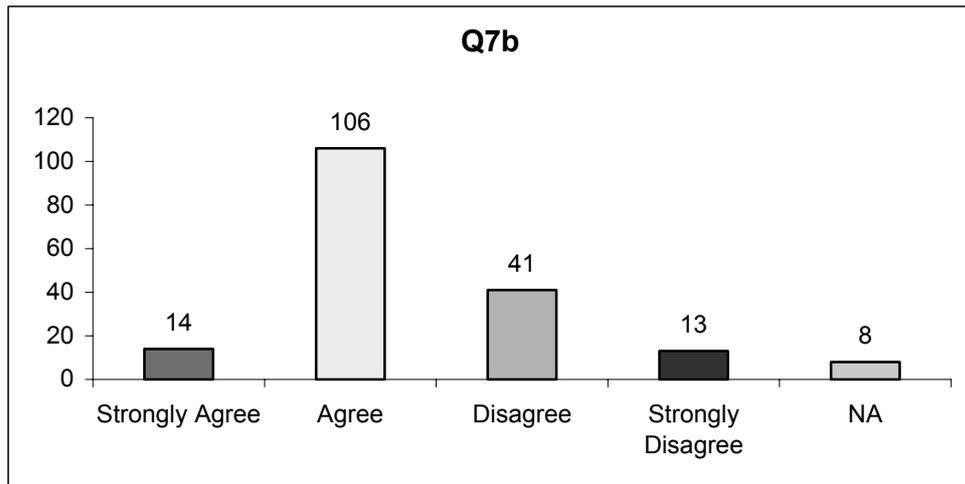
- ◆ good preparation for exam
- ◆ they are manageable now the requirements have been reduced
- ◆ Designing for Manufacture NABs are more difficult than exam
- ◆ too much assessment

b) The 'Design Activity' element of the NABs is practicable for staff and candidates.

**Staff and Candidates**

Response	Staff		Candidates		Overall
	No	%	No	%	%
Strongly Agree	7	8	7	8	8
Agree	54	59	52	57	58
Disagree	19	21	22	24	23
Strongly Disagree	7	8	6	7	7
NA	4	4	4	4	4
Total	91	100	91	100	100

- ◆ 66% agree/strongly agree
- ◆ 30% disagree/strongly disagree



**Comments:**

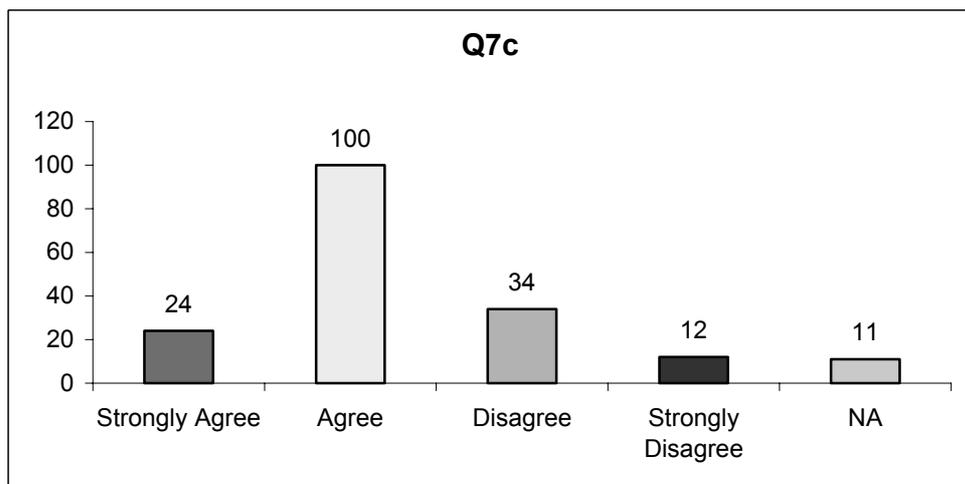
- ◆ more holistic approach would improve design — at present there is duplication
- ◆ volume of design material is too great — quality and creativity suffer due to time limits

c) The design assignment is practicable for staff and candidates.

**Staff and Candidates**

Response	Staff		Candidate		Overall %
	No	%	No	%	
Strongly Agree	12	13	12	13	13
Agree	54	59	46	51	55
Disagree	12	13	22	24	19
Strongly Disagree	6	7	6	7	7
NA	6	7	5	6	6
Total	91	99	91	101	100

- ◆ 78% agree/strongly agree
- ◆ 26% disagree/strongly disagree



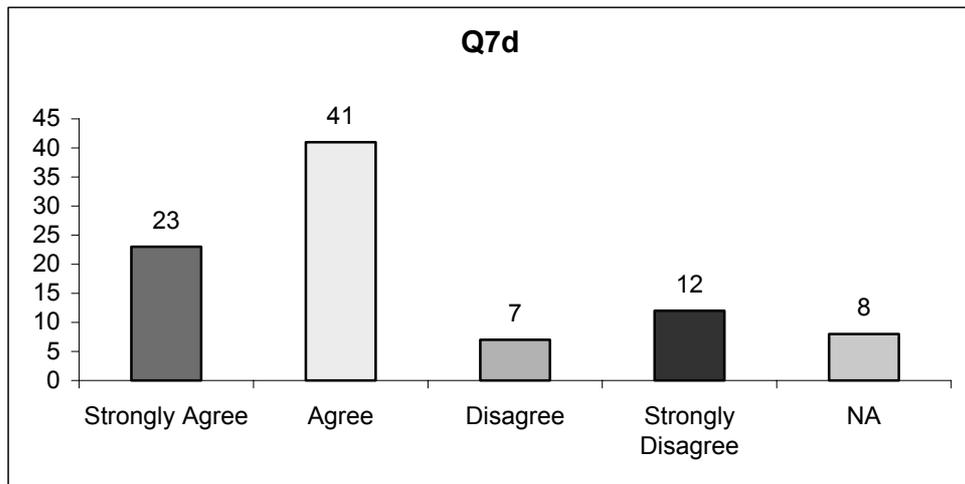
**Comments:**

- ◆ too much volume, too little time - difficult to manage Units and design assignment at same time - the weighting of the design assignment (60%) is too much, it takes over the Course
- ◆ exemplars and in-service are required, especially for probationers
- ◆ depends on how it is taught
- ◆ favours candidate with an art/graphic background or those who are good at English
- ◆ too much copying

d) The design assignment is the most appropriate instrument for assessing design ability.

Response	No of responses	%
Strongly Agree	23	25
Agree	41	45
Disagree	7	8
Strongly Disagree	12	13
NA	8	9
Total	91	100

- ◆ 70% agree/strongly agree
- ◆ 21% disagree/strongly disagree



**Comments:**

- ◆ good for establishing design skills
- ◆ a more holistic approach should be taken
- ◆ assessing the wrong thing – candidates are jumping through unnecessary hoops

With reference to the proposed external assessment models (presented in Appendix 3 of the questionnaire).

8) Which model do you prefer?

<b>Response</b>	<b>No of responses</b>	<b>%</b>
A	48	53
B	16	18
C	12	13
None/NA	15	16
Total	91	100

- ◆ 53% prefer Model A
- ◆ 18% prefer Model B
- ◆ 13% prefer Model C

**Comments:**

- ◆ exam would be too much pressure — folio work is best
- ◆ removing full design assignment would ease workload — design assignment is too demanding
- ◆ would like to teach design assignment
- ◆ Model C is fairer

## **Appendix 3: Summary of responses from key stakeholders**

### **Interviews with candidates**

#### **Sample of candidates**

53 candidates from 3 schools were interviewed, in groups. They included:  
5<sup>th</sup> and 6<sup>th</sup> year candidates doing Higher Craft and Design, one doing Advanced Higher  
some Practical Craft Skills candidates  
20 Art and Design candidates  
Most had done Standard Grade Craft & Design.

#### **Reasons for choosing Higher Craft and Design**

want to become trained in a trade eg joiner, plumber  
most enjoyed/were good at Standard Grade  
liked design  
want to go on to a designing career (eg product design)

#### **How does the Course compare with Standard Grade?**

different to Standard Grade – there's not much Craft  
title misleading – it's not Craft and Design at Higher - the title makes you think it is a boys' subject but it is more like Product Design  
natural progression - same but investigating further/developing ideas

#### **If the title was Product Design would you still choose the Course? (20 candidates from one school asked)**

most wouldn't choose Product Design but a few would

#### **Do you enjoy the class? (20 candidates from one school asked)**

yes, most enjoy, but two don't like Higher C&D

#### **Would you like more practical work in this class? (20 candidates from one school asked)**

yes, all want more practical - makes the Course enjoyable

#### **What is your definition of practical work?**

making stuff - fully finished artefacts like in Standard Grade.  
folio work - drawings

#### **Do you like the design assignment?**

most enjoyed it

#### **Candidates in all schools were asked if they would prefer a different model of external assessment**

there were mixed views on whether an exam or design assignment was preferable, and on the nature of the design assignment

#### **How does Craft and Design compare with other Courses?**

many think it has more, or a lot more, work than other subjects

#### **Practical Craft Skills (20 candidates from one school asked)**

easier than other subjects - good as there is no written assessment

#### **What do you think about the balance between 'practical' and 'design' activities? (28 candidates from 2 schools asked)**

The 28 candidates had mixed views on this.

Another group of 15 from one of the same schools was also asked this – this group did not want more practical in the Course as they felt that the folio was practical – a view strongly expressed by the girls in the group. A number of the group were also doing PCS and felt that this gave them enough practical work.

#### **Thoughts on AH C&D (28 candidates from two schools asked)**

lots more work - less prescriptive – difficult to get into right frame after Higher

### **Feedback from working group**

At a meeting of a Craft and Design working group in November 2002, the seven members of the group were given the background to and on update on, the review and consultation process.

The working group felt that some Higher candidates are not prepared for the emphasis on design in the Higher Course - they miss the practical work and some drop out. Candidates need to be informed about the changing emphasis of the Course, and guidance teachers need to be aware of content of Courses.

#### **Content review – nature, scope and depth**

‘Product Modelling/Visualisation’ was suggested as a possible third Unit. This Unit could:

- ◆ cover designing, developing ideas, synthesis, realising, evaluation and reverse engineering
- ◆ include making/using a range of models using 4/5 techniques/prototypes, rather than be focused on a final polished product model
- ◆ encourage creativity and ability to visualise designs

Assessments could include:

- ◆ written assessment – describe where modelling fits into design process
- ◆ skills and knowledge - evaluation techniques eg advantages and disadvantages of using computer model, material knowledge
- ◆ practical model making: the finished product - photos with annotations, sketches
- ◆ mechanical, functional testing – test rigs, user trials
- ◆ ergonomics, aesthetics (shape, form, balance, texture, colour)

### **Feedback from Subject Advisory Group**

A Subject Advisory Group was established to advise the development team and working groups at all stages of the review. The membership of this group was:

Dave Charnley  
Steve Roy  
Chris Munro  
Fergus Arnott  
Linda Megson  
Allan Stephen

Ullapool High School  
Portobello High School  
Hazlehead Academy  
Dumbarton Academy  
James Watt College  
Monifieth High School

At a meeting of the Advisory Group in March 2003, members were updated on the findings from the consultation. They made the following comments.

#### **Title**

- ◆ There were a variety of views on a possible Course title.

#### **What differentiates the levels of C&D?**

There were differing views on what should differentiate the levels, and how far the Courses should be designed to make bi-level teaching easier.

### **Course aims**

act/think like designer - understand implications of design on environment  
develop creativity and be an informed consumer  
develop generic skills – analysis/problem solving, communication, ICT skills

### **Progression**

There is a lack of Courses at lower levels.

### **Course structure/content - proposed model**

Members liked the proposed model.

Want to avoid jumping between Units, the Units should be organised so this is not necessary.

Modelling can be taught throughout all Units (but assessed in Unit 2).

First part of Course should be soft skills/conceptual.

### **Design assignment**

The DA is very prescriptive but the field like this guidance.

Candidates who are good at English can do better than a candidate who is good at Graphics - there is a bias towards the written element.

Would like to have prior notice of topics (as in assessment of other subjects such as Art and Design and English) - this would be a more level playing field. A bank of design tasks could be used in case a candidate has a problem with a specific design task.

If manufacturing is done badly should we ditch this or should we look at how to increase performance in this area?

The new model of the shortened DA sounds attractive as long as the exam would not be increased. Other assessment would not need to be extended as QP and NABs already cover sections of the DA to be removed.

### **Practical vs design work**

Too much Design may put some candidates off.

Sketch books and background thinking is important not the finished product.

## **Feedback from Technical Education Assessment Panel meetings**

At meetings of the Assessment Panel in November 2002 and March 2003, the following issues were raised:

Some members expressed concern that the Courses were moving away from a traditional Craft and Design route and becoming more orientated towards product design.

Course title - the members proposed the name '3D Design'.

A brief discussion on Practical Craft Skills ended with members agreeing that there should be no exams included in this qualification and it should concentrate on practical work.

## **Feedback from meetings with groups of teachers**

Two meetings were held with groups of teachers, in March 2003 – one with 10 principal teachers from Perth and Kinross at a Curriculum Panel meeting; the second with 15 teachers from Edinburgh City. The following feedback was gathered.

### **Is there a need for Intermediate 1/Access Courses?**

Most supported this proposal – some were opting for NQ Courses only, and so would need NQ Courses at all levels.

Some would like Practical Craft Skills at lower levels, with no paperwork (unlike the current *Enterprise through Craft* cluster)

Some delegates were unsure about the validity of Design at Access level.

**Should Intermediate 1 be similar to Standard Grade?**

Intermediate 1 Course should be similar in nature to Standard Grade (SG). This would work if Intermediate 2 was 'tweaked' in line with SG.

**Would your centre use additional Practical Craft Skills Units?**

Yes (3) No (7)

**Design assignment**

would like design brief from SQA

if DA shortened it would free up more time but would also need to reduce percentage of marks (maybe 40%)

like introduction of theme's this has levelled the playing field a bit

**Should practical work contribute to the final grade?**

Yes (5) No (5)

**Product Model Unit**

Product Model is a burden - not part of Course assessment - it should be dropped.

**Title**

Product Design - too narrow, vocational.

**Other**

need more guidelines for Manufacturing Processes

updates coming out late

more universities accepting Higher C&D for entry - do not want this situation to change - universities like models

If research is not done properly then candidates lose marks later on as constantly referring back to this section

under pressure to start the Course in August as little time available, deadlines are at the end of April

**Feedback from a university lecturer**

A meeting was held with a university lecturer from Strathclyde University in March 2003. The following issues were discussed:

**Progression between levels of the Course**

Useful points made regarding the nature of progression in Technological Education.

Two research projects in design and technology: *The Assessment of Performance Unit Project* and *Understanding Technological Approaches* will be of value when we are looking at differentiation of the levels of Craft and Design.

**Title of the Course**

Initially felt that the Course should be called 'Product Design', but given the issues raised by other stakeholders, liked the title '3D Design'.

**Nature and place of practical work**

Candidates at this university do a lot of modelling. They carry out a range of modelling techniques.

**Assessment of designing**

Design assignment too prescriptive - liked the cut-down version because it encouraged creativity.

## **Feedback from meetings with university/college lecturers**

Two meetings were held – one with a group of three lecturers from Napier University, and the other with an individual lecturer from James Watt College. The following issues were discussed:

### **Title of the Course**

The lecturers had a strong opinion that the Course should be called 3D Design. They explained that Product Design was too narrow and they felt it did not fully describe the content of the Course.

### **Progression between levels of the Course**

Lecturers indicated that in university, level was indicated by response. The same task could be given to a 1<sup>st</sup> year candidate and a final year candidate.

### **Assessment of designing**

Lecturers felt that the design assignment was too prescriptive. They did acknowledge the reasons for this method when told the number of candidates taking the Course.

### **Feelings about the Course**

Lecturers' opinions were based on design assignment that candidates presented at entrance interviews. They felt that the candidates were 'jumping through hoops' when doing the design assignment. They felt that, when questioned, candidates did not demonstrate a deep understanding of what they had been doing. They would prefer better graphic skills.

## Appendix 4: Proposed Course structures

- ◆ Intermediate 2 and Higher Courses will have same structure, ie three x 40 hour Units.
- ◆ The content of the Units at each level will be similar to allow progression and bi-level teaching.
- ◆ Titles of Units at each level will be the same.
- ◆ Type of Unit assessment will reflect the balance of knowledge and understanding and designing within the Unit (see Appendix 5).
- ◆ The content of Units will be:

UNIT 1 (40 hours)	UNIT 2 (40 hours)	UNIT 3 (40 hours)
Design process & design team	Idea generation & development	Construction of prototype or presentation models
Evaluation of products	Communication of ideas (graphic techniques and soft modelling)	Industrial/commercial manufacture of a proposed solution
Design factors		Materials and manufacturing processes
Problem research		
Design specifications		

## **Appendix 5: Draft assessment rationale**

### **Assessment objectives**

The key elements of the Course are knowledge and understanding of the design process and commercial manufacturing techniques and processes, together with the development of problem solving skills through design activities. These, therefore, represent the key objectives for the assessment of the Course. These key objectives will be assessed in both the internal assessment of the Units and in the external assessment of the Course.

### **Internal assessment**

Internal assessment is designed to assess the Outcomes and Performance Criteria of each Unit.

Within each Unit, candidates are required to demonstrate knowledge and understanding and design ability. The amount and type of assessment used reflect the balance of knowledge and understanding and design ability within Units. Knowledge and understanding will be assessed by short written tests under controlled conditions. Design ability will be assessed by evidence generated from design activities carried out during the Unit, under open book conditions.

### **External assessment**

The external assessment will have two components:

- ◆ a written examination question paper
- ◆ a coursework assignment

These two components reflect the content and nature of the Course. The combination of the written examination and the coursework assignment ensures that the two essential aspects of the Course contribute to the candidate's overall grade. The written examination will contribute 50 - 60% and the design activity 40 - 50% of the overall grade.

The written examination will assess the candidate's ability to retain and integrate knowledge and understanding from across all Units of the Course. The coursework assignment provides the candidate with the opportunity to demonstrate skills in generating, developing and evaluating ideas.

### **Relationship between internal and external assessment and added value of the Course award**

Although mutually supportive, there is a clear distinction between internal and external assessment.

Internal assessment provides evidence of a specific level of achievement in separate Units of the Course and allows a candidate to demonstrate knowledge and understanding and the application of skills within familiar contexts.

External assessment confirms internal assessment evidence by sampling across the Course content. In addition, the external assessment will provide evidence of a candidate's ability to:

- ◆ retain knowledge and understanding over an extended period of time
- ◆ apply knowledge and understanding to more complex and integrated situations
- ◆ apply knowledge and skills in unfamiliar and unforeseen contexts.

### **Avoiding unnecessary duplication in assessment**

The combination of internal and external assessment designed for this Course ensures that there is no unnecessary duplication of assessment by ensuring that the external assessment only samples from across the Outcomes and Performance Criteria of the Course, and that there is a reasonable balance between 'sampling' type questions and those which address the 'added value' areas described above.

The areas of problem research, specifications and manufacturing processes will be assessed in the written question paper.

### **Estimates and appeals**

The NABs for the Units of this Course can provide some, but not all, of the necessary evidence for estimates and assessment appeals.

Additional evidence will be required which demonstrates a candidate's ability to retain, integrate and apply knowledge and skills in less familiar contexts from across the full range of the Course content. The evidence could include a suitable prelim examination. Evidence must cover knowledge and understanding and design ability.

### **Quality assurance**

SQA's standard setting, vetting and marking procedures will apply to the examination question paper. Attendance at markers' meetings is mandatory.

## Appendix 6: Uptake figures for the past three years

	<b>Intermediate 2</b>	<b>Higher</b>
2000	352	2,295
2001	573	2,453
2002	836	2,690
2003	811	2,530