



CCEA Level 1 Award in Occupational Studies
CCEA Level 2 Award in Occupational Studies

Summer Series 2016

Principal Moderator's Report

occupational studies

*Engineering and Engineering
Services*

Foreword

This booklet outlines the performance of candidates in all aspects of CCEA's Level 1 and Level 2 Qualifications in Occupational Studies - Engineering and Engineering Services for this series.

CCEA hopes that the Chief Examiner's and/or Principal Moderator's report(s) will be viewed as a helpful and constructive medium to further support teachers and the learning process.

This booklet forms part of the suite of support materials for the specification. Further materials are available from the specification's microsite on our website at www.ccea.org.uk

Contents

Principal Moderator's Report	3
Contact details	8

LEVEL 1 AND LEVEL 2 QUALIFICATIONS IN OCCUPATIONAL STUDIES - ENGINEERING AND ENGINEERING SERVICES

Principal Moderator's Report

Introduction

In the majority of centres moderated, good to very good practice in the delivery of Engineering and Engineering Services units was reflected in the learners' evidence submitted. The quality of the evidence presented this year was of a very good standard reflecting the specification requirements and assessed in accordance with the set criteria. A wide variety of teaching activities and innovative assessment methods resulted in high learner outcomes being achieved by the majority of learners. Where photographic evidence was used this showed learners performing realistic working activities, and in most centres this was well documented with the learner identifying the processes involved.

Engineering and Engineering Services accounted for 15% of the overall candidature.

The senior moderation team carried out a number of random spot checks on centres as part of the moderation process. This process highlighted that most centres were marking within the tolerance of the specification, although marks were adjusted in a number of centres.

The world of work is constantly changing. Today it is uncommon for a person to have only one occupation throughout their working life, so it is vital that throughout our careers we are able to transfer and adapt our knowledge and skills.

To foster these abilities, Occupational Studies allows learners to learn for work, through work and about work. This hands-on approach is ideal for those who prefer to develop their skills in a more practical, occupational environment.

Occupational Studies is both coherent and flexible and provides a good foundation.

Occupational Studies continued to be very popular with learners undertaking two units from any of the six single award pathways.

- Design and Creativity
- Technology and Innovation
- Construction
- Business Services
- Environment and Society
- Engineering and Engineering Services

Attention must be drawn to the microsite circular S/IF/24/14 for those schools/colleges intending to deliver units 37, 45 & 46. (Alterations to specification).

Basic Fast-Fit Operations

The second most popular unit in this pathway mainly due to the interest of learners in this vocational area.

Centres are becoming better resourced with the necessary tools and equipment to provide an appropriate learning environment for this unit and meet the specification.

Centres should provide good supporting photographic evidence of the learners undertaking their assessment tasks to endorse the AO2 section in their portfolio evidence.

Basic Vehicle Body Components and Fitting

Centres are becoming better resourced with the necessary tools and equipment to provide an appropriate learning environment for this unit and meet the specification.

Centres must provide good supporting photographic evidence of the learners undertaking their assessment tasks to endorse the AO2 section in their portfolio evidence.

CAD Computer Aided Design

This unit is becoming more popular with centres, and in general it is well delivered and the exemplar portfolio from the CCEA website is being used.

AO1

The worksheets in this unit covered the requirements of the specifications, but there could be a greater use of stretch and challenge questions to differentiate between candidates. The Careers and Environmental Issues sections give possibilities for individual research and allow for differentiation. Environmental questions dealing with recycling and re-using as well as conservation of energy should be considered. Over lenient marking in this area was mostly as a result of the simplistic nature of the worksheets.

AO2

There are still some issues surrounding the requirements of the specifications. The CAD product should only be in 2D and not 3D. There is an exemplar on the CCEA microsite, and this should be consulted if in doubt. Most of the issues around components/symbols library must relate to the drawings and not the CAD command symbols. The title on the drawing should be clear and concise and state the scale of the drawings. This is a popular unit and it is easy to see how the candidates can use the skills learnt in this unit in the future. It especially links with the Carpentry and Joinery and Manufacturing Units.

Portfolios should contain hard copies of the assessments undertaken to facilitate moderation.

Electrical Wiring Installation

The equipment and resources are fairly minimal with display boards/panels and fixing components all reusable to a high degree.

Centres should provide good supporting photographic evidence of the learners undertaking their assessment tasks to endorse the AO2 section in their portfolio evidence.

Centres need to be aware that the specification asks for surface mounting of all cables, components and all fixings using display boards/panels with appropriate layouts.

Basic Health & Safety aspects need to be encouraged by participating centres.

Electronic Circuit Construction

The equipment and resources are fairly minimal with many components reusable. The tasks can be taught and delivered in minimal space i.e. a suitably resourced classroom or lab with soldering stations.

This unit demands a fair degree of understanding of electronic components and their identification and function. It also requires a good level of accuracy, neatness and precision in the assembly and soldering to strip-boards or PCB's to satisfactorily achieve the necessary outcomes.

Basic Health & Safety aspects need to be encouraged by participating centres with aprons and safety glasses being used. Care should also be exercised regarding solder fumes.

Maintenance of Land Based Machinery

This was the least popular unit in this pathway. The equipment and resources required are large and expensive requiring considerable space and layout e.g. tractor and/or other land based machinery and associated tools and equipment for repair and maintenance.

The vocational/agricultural aspect associated with this unit may not be as attractive to the learner.

Manufacturing Techniques - Hand Fitting

Manufacturing Techniques - Sheet Metal

Both of these units seemed to be taken together by the majority of candidates. The candidates also used identical workbooks for the two units. However, separate portfolios should be produced for each unit, and different questions in the AO1 section to allow for the different occupational requirements.

AO1

This section was generally well covered, especially the tools and materials. However, there still need to be more stretch and challenge questions to allow for differentiation of the candidates. At present most candidates get high marks in this section where there should be opportunities for the better candidates to get higher marks. It is important that the candidates research three different careers that relate to manufacturing and engineering, as some candidates had researched three general engineering careers that did not relate to manufacturing sheet metal work.

AO2

It is important that the requirements of the specification are followed for each unit. There are examples of the product that could be constructed in the specifications and these should be followed. Generally the work and standard of the final product was very good. However, there needs to be more annotation by the teacher to justify the marks awarded, and also the inclusion of photographic evidence of the stages in the production/construction process. The photographs should show the details of the quality of the product, and candidates must be wearing PPE during their practical work. This was not evident in some photographs and it is a Health and Safety concern.

AO3

The candidates gave evaluations that were very basic in most cases, descriptive rather than reflective. There was little evidence of reflection on the quality of the end product. The candidates should be encouraged to reflect on the use of the object, whether it is fit for purpose and whether it could be improved in appearance.

Plumbing

Overall the centres provided good evidence for the AO1 section in line with the specification. In most cases a good range of suitable tasks were submitted with transparent marking grids to support marks awarded. The team found a genuine effort being made in the AO3 section, however some marked somewhat leniently. End of task and final evaluations should be structured so as to reflect the skills of the actual task being undertaken. Evaluations need to be more analytical/reflective/give detailed suggestions for improvements. Overall, there was a very good effort made in this unit.

Centres should provide good supporting photographic evidence of the learners undertaking their assessment tasks to endorse the AO2 section in their portfolio evidence, and finished components should be retained.

Vehicle Servicing and Valeting Operations

An amendment to the specifications (Circular No. S/IF/24/14) was sent to all schools and colleges outlining changes to be put into operation in this unit. Evidence must be presented to cover the knowledge and understanding elements of vehicle servicing and valeting. For the practical assessments, candidates have to choose either Servicing or Valeting and not both. Several assessment opportunities need to be provided to candidates so that all the specification is evidenced.

In the majority of centres the evidence for knowledge and understanding tended to be simplistic and did not allow students to demonstrate their full potential. Centres should use a combination of open and closed questions to assess the learners.

Centres must ensure that all specification requirements are addressed i.e. both Servicing and Valeting even though the practical assessment requires only Servicing or Valeting to be carried out. The practical assessments must fully meet the specification requirements. In some centres only the minimum opportunities were provided and this disadvantaged the learners.

The evidence for the practical work in the majority of centres was photographic. This needs to be annotated and signed by both tutor and learner together with witness statements and teacher/lecturer observations. The photographic evidence must show the learners wearing the appropriate PPE.

There was clear evidence in the majority of centres showing how the learners were assessed, and transparent mark schemes showing the marks for each of the grading criteria.

The marking of the learners' task and final evaluations in a minority of centres was lenient.

Vehicle Technician Operations

The uptake of this unit is mainly due to the interest of learners in this vocational area. This unit is considered to be more challenging than the Basic Fast Fit or Vehicle Servicing units. It has a broader specification and more extensive range of coverage than the other vehicle studies units and it is therefore considered more difficult to achieve high marks.

Centres are becoming better resourced with the necessary tools and equipment to provide the necessary learning environment for this unit and meet the specification.

Centres should provide good supporting photographic evidence of the learners undertaking their assessment tasks to endorse the AO2 section in their portfolio evidence. (Note specification amendment).

Contact details

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