Moderators' Report/ Principal Moderator Feedback

Summer 2013

Level 2 Principal Learning Controlled Assessments

Construction & the Built Environment

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CB201 Design the Built Environment: Design Influences

General Comments

As with previous examination series most centres used the assignment brief contained within the Tutor Support Material available on the Edexcel website

Learning Outcome 1

Knowing the factors that influence the design processes - As in previous series of this exam many students covered the first area of local factors well. Factors described included, infrastructure, environmental issues, public consultation and the socio-economic impact of the development. Responses in relation to legislation requirements were often weakly described and were generic in detail with limited application to the intended assignment brief. The concept of embodied or embedded energy or energy efficient materials linked to reducing the carbon footprint was often only briefly explored by students. To achieve band 3 standard students are also required to **justify** their range of sustainable design features, this was rarely seen in the work submitted for moderation.

Learning Outcome 2

This Learning Outcome covers the nature and availability of utilities and how they may affect the design process- Most students identified the services of water, gas or electricity. The telecommunication and drainage utility apparatus was sometimes not identified or described by students. Most provided relevant colour identification of the services, but, did not identify nor explain the importance of the depth of each service.
An expansion of the description of the disruption to infrastructure caused during utility installation or maintenance could also be built on by students. This could include the expansion on issues such as e.g. road closure, traffic delays. There was little coverage of utility distribution in relation to drainage and telecommunications. Isolation points e.g. water valves, stopcocks etc were also lacking in the responses provided. Centres could invite guest speakers from the maintenance sector or utility experts and link discussions to the school or college with which they are being taught in.
The impact of the utility on the environment was briefly attempted by most students which included the visual effects of pylons and emissions from power plants.

Learning Outcome 3

This Learning Outcome covers the external building envelope and be able to understand and apply technical information in relation to a chosen specification. Many students failed to link their respective responses to the external envelope and local climate. Aspects in relation to shelter (roof and wall aspects), insulation (roof and wall), the external appearance of the structure and the transfer of sound (cavity wall, insulation, double glazing,

etc) and security elements were often attempted by most students. However, the requirement of structural stability and fire were often only very briefly described or not included at all in student responses. Many students identified materials and gave general specification information; however, the specification information often lacked detailed information such as depth or width of material or link to British Standards or other technical information used in relation to the specification, as outlined in the unit content.

CB202 Design the Built Environment: Materials and Structures

General Comments

As with previous examination series most centres used the assignment brief contained within the Tutor Support Material available on the Edexcel website

Learning Outcome 1

This Learning Outcome covers knowledge about construction materials, their function within structures and the use of different structural forms. The key materials forming the structural elements often included; fill materials, concrete, steel (including reinforcement), materials providing shelter and security, including materials that allow the passage of natural light, materials that provide insulation and reduce heat transfer, materials and components providing access to the building.

Students need to continue to develop their skills as to how to evaluate how different materials work together to perform different functions. Students continue to offer only limited responses in relation to the examination of a range of construction elements.

Learning Outcome 2

This Learning Outcome covers how to use materials in a sustainable way. Most students attempted or showed some understanding of aspects including the local sourcing of materials, recycling and obtaining materials from sustainable sources. Students should be encouraged to further develop their understanding and future responses to include; the use of alternative materials that are not derived from fossil fuel sources ;if the material may be produced from recycled materials for example plastic lumber; consider the amount of energy that has been put into manufacturing, transporting and fixing the material.

In the weaker submitted work students did not explain how materials could be used in a sustainable manner linked to their proposed or scenario based project/building.

To access the higher Mark Bands, as stated in previous Examiner Reports, students need to justify the use of a range of sustainable materials and analyse more clearly, in sustainability terms, the benefits and drawbacks of all of the key materials used on the project, considering their effects on the environment.

Learning Outcome 3

This Learning Outcome covers how to evaluate and use different structural forms.

Most students were able to identify the structural form that was used on drawings in their assignment brief, which was in general a structural steel frame. They then identified or described the different structural forms of timber and concrete frame, shell, cellular and cross wall. To achieve higher band marks though students need to describe more clearly the benefits or advantages of the each alternative form and link these back to the project brief. Higher marks are also awarded for the evaluation of the suitability of alternative structural forms.

The Learning Outcome also requires students to examine and analyse construction details, for higher marks this should include a range of details. As in previous years this was generally poorly attempted by students. Details could include, for example, the junction of the roof and wall or the junction of the wall and foundation.

CB203 Design the Built Environment: Applying Design Principles

General Comments

There was a great reduction in work submitted as the qualification will no longer be offered after summer 2014. For the June 2013 series the work submitted related to an exemplar scenario set in the Tutor Support Material with a few minor adjustments, and scenarios specific to the centre.

Increasingly popular and beneficial to the candidates are when the Centres devise their own scenario set within their local environment. This allowed the candidates to draw upon their local knowledge and relate their understanding to the learning objectives of this unit from others, specifically Unit 6.

In this series, all of the moderators were provided with a copy of the candidates' brief, as in the previous series. If the TSM scenario was selected any alterations were obvious to the moderator.

The centres on the whole were prompt with their delivery of the coursework, and all the required paperwork was included and completed correctly. A concern raised by the moderation team in previous years was the need for the centres to increase their annotation to support the marks they have awarded to assist the marking process. There was an improvement regarding this issue this series.

Learning Outcome 1

The students addressed a wide range, and different combinations of outcomes in line with the previous series. The work presented took the form of either, a series of leaflets for each job role addressed, a poster, or a series of presentation slides. Some candidates produced a combination of both in an attempt to fully address the Learning Outcome. All approaches were acceptable outcomes.

The students completed the identification and description aspects of the L.O. correctly, by addressing the correct types of job roles. In previous years, some students had selected job roles outside the intended "designing occupations" arena, usually craft job roles. A high percentage of the students described the job roles. Teamwork and progression routes on the whole not addressed to a higher standard than the previous series, and their work could have been expanded further regarding progression paths. Finally, the role of the professional institutions and a justification of their role were addressed, but lacked deep description and justification to access the highest mark band.

Learning Outcome 2

This LO carries the majority of the marks of the unit. It has been strongly recommended that centres chose a domestic dwelling scenario as this can

support most candidates. The student can fully engage with the task due to personal experience and circumstance. Therefore, the assumption is made that the students are more likely to be able to include a greater depth of quality to their work. An example would be when addressing materials to be used, structural form, light fittings, door paths, kitchen units, an increased understanding of the space for their floor layouts and elevations. In addition, the locality of the proposed structure can be experienced by the candidates prior or during the assignment period, this would further enhance their potential to access the highest marks.

This LO is broken down into three aspects, commenting on the client's brief, producing a design solution and evaluating their design proposal.

(A) Describes clearly, illustrates and justifies features that will meet all of the client's needs.

The students in commenting on the client's brief the candidates should aim to produce a specification for their potential design solution. The majority of Centres were successful in achieving Mark Band 1 marks for this outcome. Some students were unable to describe the main requirements of the client and therefore, unable to develop a specification to create a design solution. However, there were exceptions, as a few centres did achieve marks awarded within Mark Band 2.

(B) Produces a solution and portfolio of high quality design work that shows consistently precise attention to detail.

The students demonstrated a range of outcomes from free – hand work to CAD in producing a design solution. The students produced floor layouts, elevations and 3D presentations, with some dimensioning. There was not an improvement on previous series regarding the amount of annotation supporting the drawings. However, there were a few exceptions where the students achieve high Mark Band 2 marks. The students who did achieve positive marks demonstrated an understanding of the previous part of the LO where they addressed the client's needs.

To conclude, many candidates failed to annotate their design proposals in line with the requirements of the specification. In many cases, the lack of annotation limited the marks awarded.

(C) Evaluates the final design in detail against all of the requirements in the brief.

The third and final part of the L.O. is to evaluate the design proposal. Many students mirrored their performance in the first aspect of the L.O. when addressing the needs of the client. However, there was an improvement in marks awarded generally. This could be due to the fact the students found is easier to comment on their designs produced, rather create a plan from a client's brief. Evaluations for some students were very brief. Evaluative comments can appear throughout the L.O. and support the design ideas. This could be very clearly identified to the moderator, and could be paired with annotation for the design ideas.

In conclusion, centres generally over awarded candidates in this Learning Objective. The design proposals needed annotation to support their design work to access the higher mark bands. Many students were unable to access the higher mark bands due to not fully annotating their design ideas.

CB205 Create the Built Environment: Using Tools

General Comments

There was a great reduction in work submitted as the qualification will no longer be offered after summer 2014. In the June 2013 series, the work submitted was in accordance with the practical requirements of the specification and followed the guidance in the specification. There was a fair selection of practical tasks undertaken predominately C & J, and brickwork. The majority of centres included candidate's brief to the moderator and the working drawings provided to the candidates. It is important to note, the unit has two marking grids A&B, where B is ephemeral evidence and the moderators are only assessing Mark Grid A. The candidates' work was on the whole annotated to a suitable standard by assessors.

Larger and more detailed photographs would help to correctly identify some of the Mark Band B criteria within the witnessed evidence. In addition, the photographs should show hidden detail, for instance hidden joints in C&J, and aspects of the practical tasks that are not able to be recorded in the final outcome. This could also support marks awarded for Health and Safety and Personal Protective Equipment (PPE).

Learning Outcome 1, 2 and 3

The Learning Outcomes were attempted by many Centre's as separate aspects; learning outcome by learning outcome.

Grid A

Learning Outcome 1

This outcome produced a range of responses by the centres submitting work this series. Many candidates were able to describe hazards and risks, PPE required, people at risk, manual handling of materials, but on the whole the work lacked detail to access the highest mark bands. Aspects of the L.O. which were poorly addressed were, COSHH and self-reflection were only briefly attempted, with a small percentage failing to cover this aspect of the L.O. at all.

Learning Outcome 2

The majority of the candidates were able to briefly describe, but were not able to demonstrate a level of understanding relating to the working characteristics of the chosen materials. Manual handling of the chosen materials, the safe storage of materials on site, and the advantages and disadvantages of other materials were all areas certain candidates failed to address. To achieve higher band marks all the above areas of the L.O. needs clearer description and justification to access mark band 3.

Learning Outcome 3

Photographic evidence is essential to the successful completion of this L.O. supported with detailed and evaluative annotation addressing the candidates' good working practice, and the general progress of the manufacturing process, and reference to tolerances. It was noted that some centres produced excellent evaluations of their practical work commenting on the manufacturing process to a good standard. Particular areas of concern were where the candidates failed to refer to the measurements and tolerances. This is a key aspect of Quality Control records.

It is suggested a possible way to access all the marks available in this L.O. would be to present the work in a PowerPoint presentation recording the "practical journey". This would provide the candidates with an opportunity to demonstrate the Quality Control procedures and evaluation skills employed during the manufacturing process by annotating the photographic images.

Learning Outcome 4

The L.O. was suitably answered by the candidates who were able to describe a series of craft job roles, and progression paths. However, a few centres failed to describe solely craft roles and included non-craft job role such as an Architect. Teamwork aspects and the role of and relevant professional institutions were not attempted to a good standard with many candidates falling to access mark band 3 merit.

To achieve mark band 3 standard, candidates should include fuller descriptions of the interaction with technical, supervisory and professional roles, as this was only briefly addressed. In addition, regarding relevant professional institutions; most candidates failed to clearly describe and justify the role they play within the industry. This is essential to access the mark band 3.

To achieve overall higher band marks, centres are recommended to consult further with the Tutor Support Material on the Edexcel website and to consider the comments above.

Grid B

Included within samples, the Centres used the correct documentation to support the awarding of the centre's marks to learners with a centre using video footage to support their marking.

Conclusion

Regarding centres moderating their candidates work; a few were over generous in their marking selecting the incorrect mark band or, awarding the marks inaccurately within the mark band. Correct adjustments in both directions, were made by the moderators. However, on the whole the majority of the centres were correct in selecting the correct mark bands and the marks within.

CB206 Value and Use of the Built Environment: Communities

General Comments

This unit tends to be one which forms the latter part of the qualification and candidates tend to answer the first learning objective well, however the following outcomes tend to be weaker. This year saw more evidence of the application of the unit to the maintenance and improvement of the built environment.

Learning Outcome 1

This Learning Outcome asks candidates to describe some sustainable practices that are linked to the overall maintenance of the built environment. Candidates described some sustainable practices but did not appear to link these to the maintenance of the built environment.
This year's work has from some centres improved in quality with the depth of evidence given by some candidates.

Marks could be lifted into higher mark bands by candidates describing the use of locally sourced materials for maintenance, the use of materials from sustainable sources, the use of energy saving replacements fittings, the minimisation and recycling of maintenance and operational waste, the increased expenditure on higher specification materials to promote longer life spans, and finally how feedback to the design team could improve future projects. The latter is still an aspect that many candidates still have not grasped which would attract additional marks into the next band.

Learning outcome 2

This learning objective asks candidates to describe the local property market and identify factors that lead to the development of sustainable communities, and to describe ways in which construction and the built environment contribute to the creation of wealth.

Many candidates managed to describe the local domestic property market, but did not include a detailed description on commercial and industrial property. The creation of wealth through the construction and built environment was again not considered in any depth by many candidates.

Higher mark bands could be achieved by evaluating the property market, and the range of ways in which the built environment contributes to the creation of wealth.

Learning Outcome 3

This learning objective asks the candidate to describe ways in which the built environment could be improved, stating the benefits of designing for future expansion, and to describe the key factors influencing the development of sustainable communities.

The candidates described improving the built environment and future expansion issues but did not consider this in any depth.

Marks could have been improved by describing the benefits of future expansion along with factors that influence the development of sustainable communities. Planned and routine maintenance could also be addressed.

Learning Outcome 4

This Learning Outcome asks candidates to describe key job roles, including teamwork aspects and progression paths within building maintenance property services and facilities management and to describe the role of the professional institutions.

Candidates have described the various facilities management and maintenance roles but again did not detail enough about teamwork aspects or progression pathways.

The role of the professional institutions was only briefly described by many candidates and needed to be expanded into what services they provide for their members.

Candidates could have lifted their marks into higher mark bands by identifying the links with supervisory roles, and justifying the role of the professional institutions, that is, what do they provide for industry and their members.

CB207 Value and Use of the Built Environment: Facilities Management

General Comments

This year has seen some improvement in the quality of the work provided by centres.

Learning Outcome 1

This Learning Outcome asks the student to know about the maintenance of the built environment, in terms of reactive, cyclical, and preventative measures. The level of evidence from many students consists of brief descriptions of some types of maintenance along with some examples of maintenance items. Not many students covered the cyclical maintenance and provide any examples.

Students could have lifted their work into higher mark bands by a more detailed description of the three types of maintenance, examining three typical maintenance items in detail and explaining the benefits of undertaking this work, along with standard contract maintenance items in the defects liability period. The later was considered by some students who had examined the unit specification. Higher mark bands require a detailed justification of the purpose and benefits of maintenance.

Learning Outcome 2

This Learning Outcome asks students to understand how services are provided, to include a description of direct labour methods, utilising external contractors, life cycle costing, how maintenance extends a buildings life and three economic and social benefits.

Students have provided good evidence on the social benefits but only briefly provided evidence applied on an organisations use of direct labour and external contractors. Students did not consider the economic benefits of maintenance.

Marks could have been lifted into higher mark bands by a more detailed description of the impact of such services on a buildings lifespan, the use and methods of contracted out services, and detailed descriptions of the social and economic benefits provide by the use of such managed services.

Learning Outcome 3

Students provided some aspects of facilities management along with the benefits of this provision. The roles of the people involved within FM were obtained from external sources with some adaptation by students.

Marks could have been lifted by a more detailed description of four key features of the company's facilities management provision, along with what is managed for each of the above key features and what are the benefits.

The relative merits of direct labour and contracted services required detailed explanation along with alternative approaches to the facilities management of the companies that students had examined.

Grade Boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:
http://www.edexcel.com/iwantto/Pages/grade-boundaries.aspx

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