

Moderators' Report/
Principal Moderator Feedback

Summer 2012

Principal Learning

Manufacturing and Product Design
Level 2 Controlled Assessments

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Unit MP202_01

The Impact of the Global Business World on Manufacturing

Administration

Very few centres submitted work for this unit. All the portfolios were arranged in a logical way that made the moderation process easy and straight forward. The Candidate Record Sheets were all complete and again this made the process of finding evidence in the pieces of work easy.

Standard of assessment

In general the portfolios submitted were very slightly over marked when compared with the National Standard. Centres are advised to constantly refer to the points in each Mark Band when assessing the various Learning Objectives in this specification so as to ensure that they are adhering to the National Standards.

Marking Grid A

Learning Outcome 1

The Specification for this LO clearly asks the candidate to look at the social, economic and environmental issues that ensure sustainability in the specific manufacturing business under study. Very few candidates were able to elicit marks in the highest Mark Band in this LO. To achieve the highest marks candidates should have explained thoroughly exactly how a business should or does balance business issues and this should have been linked to sustainability. Very few candidates' portfolios provided such an explanation.

Learning Outcome 2

There were very few candidates who achieved marks in the highest Mark Band in this LO. This was due to the way in which candidates made very basic statements or outlined the issues regarding the world market economy and global trading and what effect they have on manufacturing. Many candidates produced very simplistic statements that did not justify or expand the points that had been made. Many of the statements it was felt may well have been gleaned from the internet with little or no additional comment from the candidate.

Learning Outcome 3

It was felt that in this LO the majority of candidates did look in depth at the delivery of a manufactured product and there were some sound descriptions of the issues involved. However, there was less information and discussion of the relationships involved between the manufacturing business and its suppliers. The moderator would expect to see some kind of description of how suppliers might be sought in terms of economics and material and component availability and how those might be ordered. There could have been, perhaps reference to

electronic ordering systems etc. This would have allowed the candidates to give a more rounded response and thus achieve marks in the higher Mark Bands.

Learning Outcome 4.1

There was a lack of in-depth analysis of different marketing approaches and how they can be used to identify customer needs. The majority of candidates were content with making very bland comments or statements which could not be described as detailed or thorough. The moderator would have expected to have seen some indication that they had an appreciation of the supply chain as well as customer needs and requirements.

Learning Outcome 4.2

This LO gives the candidate the opportunity to display their designing skills and produce a well thought out carefully planned promotional product. The moderator was expecting to see ideas presented and then developed with written notes to demonstrate that the candidate had carefully developed and then justified design decisions taking into account the market. Although all the candidates did produce some very good final pieces of promotional literature, some completed in a very professional manner using desk top publishing, it was felt that there should have been far more justification and comment than there was. The moderator would have expected to have seen some kind of developmental process with some in-depth comments on what ideas were acceptable and what were unacceptable with reference to the specific market.

Conclusion

It was felt that in the majority of instances the centre assessment of this unit was slightly lenient when compared to the National Standard.

Centres are recommended to refer constantly to the Assessment Focus and the Mark Band Descriptors as published in the Specification to ensure that candidates are able to access as many marks as possible.

Unit MP203_1A

Working in Manufacturing

Administration

As in previous years very few centres submitted work for this unit. All work was received by the stated deadline as required in the Specification. In general, it was easy for the moderator to locate the evidence for each learning outcome. Work from each learning outcome was clearly labelled and this made the moderation process very straight forward. However, some centres should remember that a completed assessment sheet or an Edexcel mark printout should have been included with the sample. In some cases this was missing. The Candidate Assessment Sheets did have information included, such as the pages where evidence could be located and this made the centre assessment processes fairly easy to follow.

Standard of assessment

In all the work that was moderated the assessment by the centres tended to be consistent but slightly lenient when compared with the National Standard.

Marking Grid A

Learning Outcome 1

Finding the evidence in this LO was in some instances quite difficult. Much of the material for this LO was gathered during visits to companies. This approach is to be commended. However, it was felt in some instances that not enough was made of those visits and that more use could have been made of direct contact with workers that had been interviewed. In the majority of instances the sections dealing with 'equality' and 'diversity' were attempted well by candidates as information on these areas had been gleaned from material that had been handed to candidates on visits to companies. This did however lead to some issues as it often meant that much of the material produced in a single centre tended to be very similar as all candidates had used the same source material. When it came to the trade unions, it was felt that much of the material had been obtained from the Internet and merely copied with little attempt at an in depth explanation.

Learning Outcome 2

In this LO it was felt that candidates did not really exploit any visits they had undertaken and the discussions with workers that they presumably had on trips to the various companies that had been experienced. Candidates did refer to the visits, but few commented in any depth on the roles that various people in those companies undertook. It was felt that in the main, any comments or discussions did not go far enough. To have gained marks in the highest mark band, the moderator would have expected to see thorough descriptions of the work undertaken by various employees. The moderator felt that these descriptions of roles were lacking. Added to this, candidates would be expected to describe in detail the various career options that were available in the company visited. There were some statements about qualifications but little about actual career

progression and on the job training etc. As in LO.1 much of the information appeared to be from the internet with no additional comments made by the candidates.

Learning Outcome 3

From the evidence that was presented, it was clear that all candidates did work as part of a team. However, the main point of this LO is that the candidates should evaluate themselves. They should comment on how well they thought they actually did as part of their team. There should have been some explanation on how they felt they contributed to their team and those comments should have included positive and negative issues. In the majority of cases this kind of evaluation was sadly missing. The majority of work included mere descriptions of what happened. Candidates should be reminded and encouraged to be totally honest in this section and talk through the not so successful elements as well as those parts that went really well. It should not just be bland statements saying that one member of the team did one thing and another member did something else.

Marking Grid B

It was clear from the evidence produced in Learning Outcome 3 that all candidates had participated in working in a team and produced various products. All centres had assessed this material and completed the Candidate Record Sheets accordingly. It should be said that the majority of candidates scored in the mid Mark Band range.

Conclusion

Centre assessment of this unit was slightly lenient when compared to the National Standard.

Centres are recommended to refer closely to the Assessment Focus and the Mark Band Descriptors as published in the Specification to ensure that candidates are able to access as many marks as possible.

Unit MP204_01

Designing and Developing Products for Manufacture

Administration

The majority of the work was neatly packaged by the use of a single treasury tag in the top left hand corner of the Candidate Record Sheets (CRS) to bind the candidates work together. CRSs were generally completed in full, including typed descriptions of provided evidence. OPTEM forms were supplied with candidate's work, which assisted moderation.

Standard of assessment

Overall the centre assessment of the candidates work was in line with the National Standard. Assessors annotated throughout most of the scripts provided for moderation, clearly indicating which Learning Outcome (LO) is being awarded or attempted.

Learning Outcome 1

Candidates were required to state why research and design/development are important, to outline the basic stages of research and development and how they add value to the manufacturing process. All candidates produced similar evidence, which was cross referenced from other sections of the design portfolio. The candidates produced some good reports satisfying this Learning Outcome. Candidates generally gained marks for identifying factors such as popularity, competitors, materials, size, ergonomics, money, time and safety. However, some candidates failed to detail some of the basic stages of Research and Development (R&D).

Learning Outcome 2

The centres required candidates to explain the factors that affect the design and manufacture of a product, indicating social, economic and sustainability factors. Most candidates addressed this LO by producing brief reports detailing the aspects of this LO, continuing with further depth in some cases.

Learning Outcome 3.1

Candidates were asked to interpret client needs; generally the candidates clearly interpreted the client briefs, providing some photographic and video evidence. The majority of the candidates carried out market research with back evidence from the assessor in regards to a presentation.

Learning Outcome 3.2

Initial and final designs were completed to a high standard by the majority of the candidates. All candidates produced evidence of prototypes being developed and evidenced with photographs. Candidates generally completed basic PDS's and centre should perhaps in future ask candidates to focus on this aspect of the LO.

Conclusion

Centres are commended for their presentation and organisation of candidate work, including annotation, explanations and feedback to candidate/moderator. All work was completed to a good standard however, there were some minor errors on Candidate Record Sheets.

Unit MP205_1A

Application of Materials Science in Manufacturing

Administration

The majority of the work was collated and held together with a single treasury tag through the top left corner of the candidates work which aided moderation. Candidate Record Sheets (CRS) were generally completed but not in full (some candidate numbers were missing), which indicated where the evidence was located per Learning Outcome (LO). OPTEM forms were provided by the centres with most containing the relevant details.

Standard of assessment

This unit was mostly assessed in line with the national standard. All pieces of work contain some annotation ticks and identify Learning Outcomes. Centres should be commended for the annotation identifying which Marking Band (MB) is being attempted/achieved within which each LO.

Learning Outcome 1

Candidates were asked to give details of materials, processes, and principles used to manufacture a product. Candidates described the properties and characteristics of each of the various products e.g. egg cups, masonry drill bits, model aircrafts and teaspoons. There were some descriptive aspects to the candidates' narrative, with some candidates achieving MB3.

Learning Outcome 2

For this LO the candidates were asked to provide evidence covering how technical and scientific developments affect the manufacture of a product. The candidates were required to complete reports, describing the advancements of technological developments. Some centres provided a DVD, which greatly assisted the moderation process.

Learning Outcome 3

The candidates were asked to describe properties and characteristics that affect the manufacture of a product. Candidates briefly discuss the properties of some substances relating to the examples listed above, however the majority of candidates did not fully meet the requirements of this unit.

Learning Outcome 4

Evidence for this LO is generally covered throughout the text of the candidates work and at times hard to locate evidence. Evidence for this LO was in form of a list, with corresponding outlines of each test listed. Thermal conductivity, electrical conductivity, flammability and impact test, as examples.

Conclusion

Generally the candidates seemed to have a good understanding around the manufacture and process relating to the manufacture of each of the listed products i.e. an egg cup, masonry drill bit, model aircraft and teaspoon. Centres should be advised that candidates did not maximise on LO2.

Unit MP206_1A

Applications of Processing Systems in Manufacturing

Administration

All centres are now providing each candidate with a Candidate Record Sheet (CRS), indicating the scores for each Learning Outcome (LO), and the total score for each portfolio. Some centres are also including their own marking feedback sheets, which summarise the markers conclusions for each Learning Outcome.

Although this is intended primarily as a feedback tool for the candidates within a centre it also allows the moderator an insight into the marking methods employed and so proves useful.

It was noted that in some instances marking sheets devised by the centre supplied did not include all the Learning Outcomes.

Standard of Assessment

The majority of centres are marking in line with the national standard. However some centres are still marking too leniently across all Learning Outcomes.

Learning Outcome 1i (Marking Grid A)

Centres are using a mixture of industrial visits and case studies to provide the candidate evidence for this LO. A few centres are using team manufacturing construction exercises which help explain many points within this LO.

Primary photo evidence is being well-used to illustrate manufacturing processes and provide a clear picture of the experiences of the candidates during their industrial visits.

Candidate descriptions of manufacturing processes are generally being well done, although there was some indication that a few candidates had directly copied some of their descriptions. Where evidence is copied from an outside source and not accredited, or supplied by an outside source, this cannot be attributed as the work of the candidate and so must be discounted from the marking process.

Descriptions of maximising efficiency and the how the scale of production affects manufacturing processes, were generally of a slightly lower standard.

In many instances candidates included brief details of how safety is maintained with relation to the manufacturing process chosen. It is expected that candidates should provide a greater degree of understanding of safety for each stage of the manufacturing processes highlighted.

Learning Outcome 1ii (Marking Grid A)

Health and safety legislation and its impact on employee health and company reputation was briefly outlined by many candidates. Candidates are also

submitting evidence of the impact on the products being produced if health and safety was not followed.

Control procedures for the safe use of tools and equipment was not well evidenced.

Learning Outcome 2 (Marking Grid A)

The evidence submitted for this LO covered most of the required aspects although no candidate submitted evidence of referring to the actual costs of measuring quality. This could have been incorporated into classroom discussions, and linked to industrial visits, where some basic analysis of quality control costs could be included in this exercise.

It should be noted that a Mark Band 2 level of evidence requires candidates to assess – this requires the candidate to show they have made a judgement on why quality assurance is central to cost-effective production i.e. to compare strengths and weaknesses of quality assurance with reference to a specific example, which could be that used in the factory visited.

Learning Outcome 3 (Marking Grid A)

Evidence provided in the portfolios sampled clearly indicated that most candidates were aware of the importance of quality check points in their own practical activities, although few candidates justified the positioning of their critical control points.

Learning Outcome 3 (Marking Grid B)

Witness Statements were provided for this LO. This is the preferred method for providing evidence for this LO.

Although the assessment of Marking Grid B is not moderated, it is expected that evidence is provided in each portfolio to demonstrate how the assessor score is justified. This also allows a moderator to provide feedback to indicate how things could be improved.

Conclusion

Candidates should be encouraged to look deeper at the issues and justify their analysis and comments thus enabling them to access the marks in Mark Band 3. Where candidates are unable to visit or arrange industrial visits to a manufacturing company, a well-designed classroom manufacturing exercise can be used to cover all aspects of the Learning Outcomes in this unit.

Unit MP207_1A

Product Manufacture

The number of centres registering candidates for this qualification remained fairly low, and some of them required reminders to be sent requesting the samples for moderation.

Centres which submitted portfolios for moderation this series tended to include evidence which demonstrated a range of candidate ability levels, but where photographic evidence was included, they seemed to be carrying out relevant activities and appeared to be enjoying it.

Most of the portfolios which were moderated were assessed accurately. There still appears to be some obvious misunderstanding of LO3's wording which asks candidates to assess 'the importance of working to health and safety regulations'.

Administration

All except two or three centres submitted the samples before the deadline, and most of them contained all the necessary paperwork – EDIs, Candidate Record Sheets (CRS), signatures, etc.

A small number of the centres submitted folders made of cardboard and plastic. Staples should not be used as they, and folders, impede the processes of moderation and awarding. The ideal method of presentation is to encourage candidates to use A4 paper, preferably in portrait mode and preferably word processed. Fasten each portfolio together using a single treasury tag through the top left hand corner only, with the CRS on the front, and the portfolio page numbered from front to back.

Where hand written work was submitted, especially when writing frames are also used, some were almost illegible due to candidates trying to fit their comments into a small box. The use of a word-processor has increased on previous years, improving the readability and presentation, with imported photographs and images, and the use of effective subheadings addressing each section of the assessment grids, making assessment and remote moderation very straightforward.

The CRSs also contain a small box to indicate the type of evidence included for each LO. Effective annotation is also recommended on the candidates' work, for example – under a subheading 'the importance of complying with health and safety regulations' an assessor could write 'MB3 - evaluating' in the margin, to indicate where the evidence is which does exactly that. This guides a second marker, internal moderator and external moderator to the exact location of the evidence which led the assessor to award the relevant marks for this section of LO3.

Assessment

It is always helpful to a remote moderator when the centre includes a copy of the Controlled Assessment tasks with the samples. Most centres did this. Where tasks or assessment questions were included with the portfolios, most centres

were asking questions which require descriptive answers only. The assessment grid specifies that 'the importance of complying with H&S regulations' must be 'reviewed', 'assessed' and 'evaluated' to progress across MB1 to MB2, along with the 'importance of considering environmental impact and related costs', etc.

A smaller number of the tasks were asking for general detail without focussing on a real company or product – where the notion of 'applied assessment' seems to have been ignored. General advice is to consider an industry, or two, which they have visited/studied throughout the year.

Marking Grid A

This forms the candidate performance evidence, where they produce and collate evidence of what they know, understand and can do, and is generally in the form of written evidence, with some photographic evidence or other types of supporting evidence.

Learning Outcome 3

This section should contain at least 2-4 pages on each topic, with images and word processing allowing the import of pictures and images which candidates can write around, resulting in clearly presented evidence which was generated by the set tasks. Some portfolios contained a large number of pages of health and safety legislation, which is not required. The actual assessment grid wording seems to have been ignored by some centres. Where assessment was considered to be lenient, the centres had generally asked for descriptions of regulations and environmental impacts, not the importance of complying or considering these items. Definitions of the assessment verbs are provided in the specifications, at the end of the unit. Sharing these with candidates generally pays dividends and assisting their understanding can be done by using simple domino games or simply giving them a copy of the definitions as part of their assessment pack. This does not help them provide answers, but it definitely helps them understand what is required.

Learning Outcome 4

The work for this LO should normally contain at least 2-3 pages on each topic with images. Tasks which ask candidates to state items for each section, then outline and describe seem to produce good results, being easier to understand and less complicated to assess.

LO3 and 4 material tended to better represent a real product, or two, with a flavour of real and applied manufacturing and it is not difficult to imagine that good candidates do extremely well if asked to describe how lean manufacturing improved the efficiency of car manufacture, food manufacture, etc, following their visits to (or from) such industry. Unfortunately, some still appear to have, instead, relied on saying 'some companies might do ...', 'but a better company might have ...', etc, indicating restriction to classroom activities only. Most portfolios had no mention of the consequences of non-compliance with H&S legislation. The likely outcomes of non-compliance should include the possibility of fines, imprisonment, loss of reputation, loss of work, closure, etc – but little was mentioned of these points.

Environmental impact was mostly from 'general knowledge', not manufacturing related evidence/descriptions. Some mentioned a few alternative sources of energy, but only briefly and not related to any particular industry and no related costs were mentioned beyond 'the cost of this would also be reasonable' (or cheap), with no real details being provided.

Marking Grid B

For this marking grid, the evidence is generally ephemeral and needs to be recorded or stated by an observer/assessor in the form of witness statements, photographs, etc, which indicate what the candidate actually did, saying what they did well and what could have been improved. Although the marks for Marking Grid B are not moderated, it is expected that evidence is provided in each portfolio to demonstrate how the assessor score is justified. This also allows a moderator to provide feedback to indicate how things could be improved.

Learning Outcome 1 – interpret design specifications; follow standard operating procedures when making products.

Learning Outcome 2 – work as part of an effective team

Plenty of evidence was included for Marking Grid B and the specifications for these two LOs had been interpreted accurately by most centres, although several portfolios contained large amounts of theory and teaching/learning/research material which had obviously been used to inform the candidates, but this is not required in the portfolios for moderation.

Some very thorough and effective witness statements and overall summaries of performance were seen for Marking Grid B, with some of them stretching to 2 pages per candidate and lots of photographs, etc.

Summary

There is still a need to encourage candidates to focus more on the wording of LO3. It is also recommended that the 'what you need to learn' and 'delivery guidance' sections are studied by teachers/assessors (this has also being a main feature of INSET events) and the 'how you will be assessed' section is shared with and explained to the candidates.

Increasing good use of ICT was demonstrated by some centres in this series, but all centres are advised to follow suit, making the work more readable. Avoid A3 paper, unless technical drawings or sketches make this essential.

Grade Boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:

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