OCR
RECOGNISING ACHIEVEMENT

GCSE

Design and Technology: Product Design

General Certificate of Secondary Education **J305**

General Certificate of Secondary Education (Short Course) **J045**

OCR Report to Centres

January 2013

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This report on the examination provides information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the specification content, of the operation of the scheme of assessment and of the application of assessment criteria.

Reports should be read in conjunction with the published question papers and mark schemes for the examination.

OCR will not enter into any discussion or correspondence in connection with this report.

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OCR REPORT TO CENTRES

Overview

General comments

Candidate responses to the themes in A552 Innovation Challenge 'Seaside Visits' appeared very accessible to candidates with sufficient work seen for each of the four set challenges. The evidence presented by candidates showed they enjoyed the work carried out during the 'challenge' with many reflecting positively on their experience. It is reassuring to see that centres have progressed well with their understanding of the approach to this style of exam.

The examination for A554 worked well and differentiated across the range of ability. Candidates also found it accessible and most were able to attempt all questions. This is testimony to the way centres have covered the syllabus.

Controlled assessment units A551 and A553 showed a general improvement in centre's ability to interpret the specifications and follow the requirements closely. Good practice was seen in a number of portfolios presented for moderation which follows the overall trend. Centres are reminded that they should take advantage of OCR's support mechanism and email queries and questions to general.qualifications@ocr.org.uk in the first instance.

Centres teaching in a team must carry out regular internal standardisation to ensure that standards and rank order are maintained. All work should be carried out in the presence of a teacher at the Centre. To save delays in the moderation process, form CCS160 (which needs to be signed by all staff teaching the specification), should be enclosed with the selected sample of work sent to the moderator (paper or electronic format).

A551 Developing and Applying Design Skills

Administration

In general, Centre administration was effective and moderators received the required documentation and sample candidate materials on time. However, Centres are reminded that forms CCS160, CCS/A551 and form MS1 (or electronic equivalent) must be fully completed and submitted to the moderator. Form A551/CSF is an optional form for use by centres. If submitted to the moderator this form can aid the moderation process. Centres should note that form CCS/A551 will be removed from projects and retained with the other Centre administration documents as part of the moderation process. Do not rely on the CCS/A551 to identify an A3 paper portfolio. It is essential that each portfolio is identified on the first sheet with candidate name and number and centre name and number.

It is important that centres check the addition of candidate marks carefully. The transcription of the candidate mark to the MS1 should also be checked. Correcting arithmetical errors causes delay to the moderating process.

Centres must take care to use the correct entry codes for this unit. The entry codes are A551/01 for entries using the OCR Repository and A551/02 for either paper or electronic folios submitted by postal moderation.

When using electronic folios centres should ensure that the work of candidates is presented in one cohesive format. Producing individual documents for each page of a candidate folio is not an acceptable format. Centres using the OCR Repository should be aware of the file size limit of 20MB. If file sizes exceed this limit it is possible to load separate files for an individual candidate but these should be clearly labelled. Each individual file should not exceed 20MB. Electronic portfolios may be submitted to the moderator on a single CD or USB Memory Stick. These devices must be clearly labelled with a 'permanent marker' to show the Centre name and Centre number.

The majority of entries were A551/02 postal; with many centres using the option of producing e-folios in a PowerPoint format. This enabled candidates to use sound and video within their folios. Centres are reminded that they must submit candidate work using one of the formats detailed in the OCR Specification for this subject.

Where work is submitted on paper it should be presented in a logical sequence and suitably bound to enable the moderator to complete the moderation process effectively. Folders should not include teaching materials and classroom project work.

Where centres have 12 or fewer candidates entered sending all the folios to the moderator without waiting for notification of the selected sample will aid the speed of the moderation process.

General Comments

When completing this unit Candidates should be 'designing to satisfy a need'. The process candidates follow should be completely joined up. Every step is conditional on the previous step and influential on the next step.

There are no 'isolated activities' within this design process. The specification, for example, is not a stand-alone activity; it is derived from an analysis of the research into user needs and the data revealed from the analysis of existing products. The specification should then go on to both drive and control the generation of ideas and the development of a design solution.

Internal Assessment Objective 1

In general, candidates undertook design activities which were manageable and appropriate. Occasionally centres allowed candidates to undertake problems which were too challenging within the 20 hour controlled assessment limit.

It is vitally important that all candidates identify a clear problem to solve with a specific user or user group and summarise the direction of their design activity at the start of their folio. This enables them to identify and access appropriate research opportunities and also allows the creation of designs which reflect the needs of their identified user group.

Work such as planning and "what I will do and where I will look for evidence" should not be submitted in the folios as this does not attract marks against the assessment criteria.

Moderators reported that candidate's performance was higher when they were presented with a variety of 'situations' which they were able to explore in order to identify their own 'design problems' as opposed to simply being presented with a 'stock' teacher generated problem that the whole teaching group followed. Candidate performance in A551 is often better where Candidates undertake design activities involving the 'real' needs of an elderly person, a young child, a brother or sister, a friend at school, a parent or a whole family: essentially someone who is known to the candidate.

It is essential that Candidates keep an open mind whilst undertaking the design activity.
It is clear that some candidates approach the task with a pre-conceived idea from the outset. This limits their ability to produce a range of creative design solutions to the initial design problem.

Candidates need to present evidence of the user or user group. An interview, a profile, likes, dislikes, lifestyle, can all contribute to the first layer of understanding for the subsequent design activity. Fictitious users, such as 'celebrities', should be avoided. Consideration of the situation where the user experiences the need, will add context to the design problem.

As a consequence of focussing on a specific user with a specific need in a specific situation, a candidate should be able to compile a brief statement to explain that they are going to design to satisfy the need of the user (design brief).

Internal Assessment Objective 2

The main area of work within IAO2 is a research activity, where the candidate investigates, collects and analyses information. The purpose of this research activity is to ensure that the candidate has obtained relevant facts, data, measurements and opinions to be able to formulate a viable specification for the development of a solution to the design need. There should be two aspects to the research activity undertaken by candidates. These are: product analysis of similar or associated products (strand 1) and "other research" such as user requirements, ergonomic considerations and location (strand 2).

When candidates carried out existing product analysis, 'primary' research was seen to provide greater depth of information than the use of 'secondary' research methods. Undertaking primary product analysis should be one of the underpinning activities of the GCSE Product Design Course. The 'in depth' research of two or three products should be sufficient to inform the future design activity and satisfy the assessment criteria for the award of full marks. Some centres used a writing frame approach for the product analysis activity. It should be noted that this approach, or the use of pre-determined headings, can be restrictive for higher achieving candidates. Each product has its own intrinsic set of features that may not neatly fit into a predetermined list or set of headings. Product analysis is not the same as a consumer survey about a product. Neither is it a 'what I like and what I dislike about this product'.

Ideally, candidates should start their analysis of a product by identifying and possibly sketching the key features of the product. An explanation of the purpose of these features will provide the candidate with the information required to both inform the writing of their design specification and aid the formulation of design ideas.

When researching the user requirements for the product to be designed, many candidates use either questionnaires or interviews. The design of these methods of obtaining 'User' data requires careful consideration. Often, the questions asked are either irrelevant or gain very little information that will aid the design of the product. Moderators report that some centres are awarding high marks to questionnaires that often do little more than present evidence of the existence of the design problem (more suited to Assessment Objective 1). In order to achieve high marks the questionnaire or interview should illicit key information about the features or functions of the product to be designed and be fully analysed. Specific ergonomic data and other size information should also be researched and presented by candidates.

An analysis of all the information collected from and about the user, as well as the information about the features of existing products, should produce a list of key features for the solution to the need. This list can form the foundation of the specification. Some candidates fall into the trap of compiling a specification based on their own preferences, or a superficial set of points such as 'it must look good', it must be colourful', or 'it must be safe'.

Candidate specifications were often found to contain vague or generic points which could apply to almost any product. Superficial specification points such as 'it must look good', it must be colourful', 'must not be too heavy', 'must be suitable for the user', 'must be ergonomic', 'must be inexpensive' or 'it must be safe' should be avoided. This type of specification should not be rewarded highly.

The specification should be the foundation to the design activity of IAO3 and it should be 'visible' when Candidates are generating and developing ideas. Weak specifications often lead to poor design activity.

Candidates who produced a summary of the research findings were able to identify the key features of the product to be designed and were able to produce a series of justified specification points. The specification should be derived from facts and data and information: it should not be based on just the candidate's thoughts and preferences.

Internal Assessment Objective 3

There were examples of some excellent design activity, with some very creative thinking evidenced.

Development was limited in some of the work seen and candidates need to understand that development means improving and moving forwards, rather than just redrawing what has already been generated. Modelling should be used to test the feasibility of aspects of the design work. This modelling activity will then contribute to design development. Centres should note that a model of the final proposal is not required as modelling is seen as a design development tool rather than a presentation tool.

The evaluation of design ideas against the design specification is an area where candidate performance could be improved. Moderators report that candidates often produce little more than a tick box grid with limited meaningful analysis. To be awarded high marks in strand 3 of IOA3, candidates need to show an analytical evaluation of their design ideas.

Communication skills varied widely between candidates. More successful candidates presented their ideas in a 'free flowing' format, using sketching to show different views or parts of their

product. They used annotation to communicate their design thinking and used modelling and enhancement techniques, such as rendering, to fully communicate their ideas.

Design annotation should make reference to the user, aesthetics, ergonomics, function or other design influences.

When producing electronic portfolios, candidate's performance is seen to be higher when all the design work is completed on paper, including annotation. The whole design page is then scanned into the folio.

Moderators have reported that a number of centres are awarding marks for the use of CAD or Other Computer Applications (OCA) where no evidence exists within the folio. The mark for the 'use of CAD or Other Computer Applications (OCA)' is rewarded for work in **IAO3 only**. To be rewarded with higher marks, CAD should be used as a design tool rather than just to produce an image of the final design.

A552 Design and Making Innovation Challenge

General Comments

The 2012 theme 'Seaside Visits' is accessible to all candidates and work has been seen for each of the four set challenges.

Candidates clearly enjoy the work they have carried out during the 'challenge' with many reflecting positively on their experience.

Administration

To avoid delays and unnecessary 'missing script' investigation work for both OCR and the Examination Centre it is important that examination workbooks are posted to examiners as soon as the 'Time to Reflect' activity has been completed. Exams officers must ensure that that the exam register is fully completed and that a copy of the register is sent with the examination scripts to the examiner.

Examination scripts must be posted to examiners using approved secure postage. Examiners have reported that some centres are posting scripts using ordinary post services which are untraceable in the event of a parcel not being received.

Centres are reminded of the requirement to submit details of the dates of the Innovation Challenge to OCR using the VAF form. A number of centres failed to submit this form before the given deadline this session. Copies of the form are available on the OCR website – www.ocr.org.uk.

All materials relating to examinations sent from OCR to centres will be despatched to the examinations officer. It is important that colleagues check with the examinations officer that they have received all relevant and most up to date information prior to starting the Innovation Challenge activity. It is very important that centres use only the workbook and teacher script provided for Unit A552.

Running the Challenge

Centres are reminded that the role of the teaching colleague is that of a facilitator and not that of a normal classroom teacher. They are there to provide access to materials, monitor health and safety issues and read the teacher script to candidates, elaborating and explaining where this is indicated within the script.

Teaching colleagues and support staff must not give advice to candidates about the design/manufacture of their prototype product or cut materials to correct shape or size. It must be made clear to all candidates that this is an examination and we are assessing the individual candidate's designing and modelling capability.

Photographs

The quality and size of photographs supplied by most centres is appropriate for this examination. Photographs form an essential part of the assessment process. Photographs must be good quality colour images that are of an appropriate size to fit into the space provided on the work book. Centres should refrain from inserting large images that are folded to fit the available space in the workbook. The addition of a card with the candidates name within the photo aids the return of photos to candidates. Centres are reminded that four "teacher" photographs is the minimum required. Additional photos can be added to the workbook. This is particularly

important if it is necessary to show other parts or views of an artefact to fully illustrate the final outcome.

It is recommended that if candidates wish to annotate photographs that a second print is produced and stuck into either the appropriate section of the workbook or into the 'additional space' and clearly labelled and then annotated.

Completion of the workbook

Examiners have again reported difficulty in understanding candidate's work where blunt pencil, highlight pens or gel pens have been used for written work. Please advise candidates of the need for all of their work to be legible. Work should be completed in English. 'Text messaging' abbreviations are not acceptable.

Security of Workbooks

Centres are reminded of the importance of appropriate security of all workbooks between the three sessions of the Innovation Challenge. Workbooks must be returned to the examinations officer and should be stored in secure conditions.

Development of Design

Evolution through making, initial thoughts

Candidates used a mix of text and drawings to explore the selected challenge. The majority of candidates produce a range of initial concept ideas and think creatively about the challenge that they have selected. The production of a thought shower is not sufficient to justify the reward of higher marks.

Briefs

Candidates often gain little or no reward for Initial Briefs or the Design Brief. These briefs are often too prescriptive with many candidates confusing the design brief with the specification. Candidates should be encouraged to write clear and precise design briefs that offer scope for creativity. The brief should be a short statement of intent.

User/Clients

The majority of candidates identified appropriate user groups for their products. Higher performing candidates gave clear consideration of their user group whilst undertaking the design activity making clear reference to the target user and user needs.

Specifications

Examiners have raised concerns that candidates are producing vague, often generic specification points that could apply to any product. The specification must be 'specific' to the product that is being designed. Vague points such as 'it must be the right size', 'it must be ergonomic' and it 'must not cost too much' will not attract high marks. Presenting the specification in a bullet pointed format rather than in an essay style would be of benefit to candidates.

Ideas

The majority of candidates used a mix of drawings, text, annotation and occasionally modelling/photographs to show their ideas.

Higher performing candidates produced a range of creative ideas that clearly related to their design brief, specification and potential users. Drawings of both full designs and parts of designs were provided along with detailed annotation relating to materials and construction methods. Development of the design from the 'initial thoughts' was clearly evident. Designs were 'rendered' to enhance communication.

Lower scoring candidates reproduced the initial thoughts from box 1 of the challenge activity or only produced a single design idea. Very often these candidates disregarded both the design brief and specification from boxes 3 and 4.

Some candidates produced ideas based upon production using modelling materials. The design ideas should be based around the future manufacture of the product.

Examiners reported a lack of material knowledge amongst candidates. The majority of candidates failed to identify specific materials or techniques for product manufacture.

Communicating information through sketches, writing and photographs

The standard of design communication was satisfactory but examiners report that the standard of drawing techniques has declined with many candidates producing only 2D drawings. Candidates presented their ideas using annotated drawings and text.

Higher performing candidates gave different views of objects or parts of objects and clearly communicated their design thinking through the use of annotation.

The work of many candidates could have been enhanced with the use of 3D drawing techniques and rendering. Centres should encourage and support candidates to be more adventurous in their forms of communication.

Written communication is generally good but many candidates fail to use technical vocabulary when this is appropriate.

Materials, Components, Processes, Techniques and Industrial Practice

Examiners have reported that the majority of centres have prepared their candidates well for this part of the examination. Candidates from these centres clearly understood that they were making a prototype model rather than the 'final' product. Appropriate materials were supplied by these centres for candidates use. These materials included foam, foam board, card, balsa, clay, modelling clay, mechanism kits, polymorph.

Some candidates whose design work was of a good standard were limited by the materials supplied by their centres. Inappropriate or junk modelling materials impose restrictions upon candidate's use of materials and can have an adverse impact upon the quality of modelling. Sheet materials such as MDF and Plywood are often unsuitable for modelling. These materials can limit the candidate's ability to model designs appropriately and/or impact upon the candidates design work. Where these materials were used, the candidates' work was often incomplete because candidates were trying to manufacture 'final outcomes' rather than 'prototype products'. Some candidates highlight the availability of materials as a problem within the evaluation activity.

It is essential that during the product design course candidates undertake modelling activity in order to develop their manufacturing skills and knowledge of modelling materials.

Models must be an appropriate size for the candidate to be able to successfully manipulate materials and demonstrate the features of the product. Solid block models limit the candidates ability to test, analyse and develop their design.

Higher achieving candidates considered the choice of materials and components available and identified the most appropriate materials for the manufacture of their product demonstrating adept use of these materials. They completed their models to a high standard, showing all features of their design.

Analysis of ideas, models and prototypes

Peer Evaluation

The majority of candidates planned for the presentation and recorded the outcome. Clear evidence was seen of candidates using the feedback to further develop ideas. Occasionally, candidates failed to record the feedback or planning for this activity.

Development of ideas

Design development was generally good. Higher achieving candidates show clear development of their ideas between box 1 'initial thoughts' and box 5 'initial ideas'. They also show development between box 5 'initial ideas' and box 9 'developing your idea'.

It is important that candidates use notes or annotations to show how they are developing their design towards an optimum solution that satisfies the design brief, specification and needs of the user.

Producing a model of the initial idea or redrawing the initial idea does not show development of the design and therefore will gain no marks for design development. Candidates should consider the construction and operation of their design during design development.

Evaluation

Many candidates produced detailed evaluations of their prototype product. Higher performing candidates clearly considered each element of the evaluation section of the workbook and also provided detailed analysis of their design in relation to the design specification.

Reflection

To score highly candidates should focus on the product design rather than the modelling activity. It is essential that candidates use the 30 minutes available to read through their workbook and reflect upon the product design. They should identify strengths and weaknesses in the design and suggest detailed alterations/improvements. Where design alterations are proposed these should be drawn and clearly communicated. Cursory written comments will not attract high marks.

A553 Making, Testing & Marketing Products

Administration

Centres should ensure that files are 'packaged' correctly within the folio. Moderators have experienced difficulties when accessing files that have not been correctly uploaded.

The use of PDF files with hyperlinks to YouTube or similar web based programmes is also working well and giving centres a range of options

In centres where there are more than one staff teaching candidates, it is essential that internal standardisation is completed in order to ensure that standards are maintained and the correct rank order is applied. All work should be carried out in the presence of a teacher at the Centre. To save delays in the moderation process, form CCS160 (which needs to be signed by all staff teaching the specification), should be enclosed with the selected sample of work sent to the moderator (paper or electronic format).

Candidates are free to present the work in any appropriate medium, both on paper format or in electronic format on CD, but not a combination of the two. CD seems to be the favoured format for this unit and the use of photographs, sound and video is becoming popular. The use of the OCR repository has worked very well where Centres have uploaded work to the system.

OCR would prefer candidates' work is submitted on individual CDs for this unit. Centres should be aware that electronic folders are not returned, so ensure a copy is kept at the Centre.

Internal assessment Objective 4

This is all about creating a single, functioning, quality product. All evidence in the portfolio should be through photographs and annotation and the final outcome should be a working product not a model.

A good range of products were presented for moderation varying considerably in size and complexity. If centres are making similar products with all candidates it is important that candidates show ownership of the work and folio – photographs should show the individuals approach to the product and be commented on accordingly.

The submitted evidence should be a diary explaining what has been achieved and how problems have been solved and must include evidence of how candidates have used economy in their approach, how they have worked safely and how they have worked with precision. A plan, time lines or similar are not required.

The production log should consist of a range of photographs showing a range of skills, materials and the equipment used. Candidates should show ownership explaining how they completed the product. Candidates should demonstrate economic use of materials and how they obtain precision in the making of the product.

The use of CAD/CAM should be encouraged; however this represents a single manufacturing skill. Centres must ensure candidates have used a range of skills in the production of practical work in order to achieve higher marks. If CAD/CAM is used, candidates should produce evidence they understand the process by using screen shots and appropriate annotation.

The quantity and quality of photographs enclosed in the portfolio is important. Centres should ensure sufficient photographic evidence of a good quality is available to justify the awarded marks**.** Candidates should include close ups showing the quality and precision of their work.

Internal assessment Objective 5

This objective is all about taking the product forward and needs to contain no reference to the making process.

Evaluations were well done with reference to the specification and appropriate photographic evidence of realistic user testing. Good video evidence of testing and user views is strong in this unit.

Modifications and improvements to the product should be seen as a product development opportunity; candidates should sketch possible improvements that could be made to their product with appropriate annotation. Candidates may wish to alter or draw on original images of the finished product or use overlays in an innovative design way. This element of the objective tended to be over marked by centres as it was not design based and improving the product, but often focused on what could have been done during the making.

Quantity production continues to be an area where candidates/centres could improve marks. Candidates should research how their product could be made in a Real World situation and apply the knowledge gained to parts of their product.

Candidates should be encouraged to develop a marketing strategy which is innovative and creative in its approach. This should be the fun element of the course. Centres should encourage candidates to explain the reasoning behind the type of marketing presentation used. If the product was to be taken to full production, where and how would the candidate want to advertise/promote the product in order to maximize its market potential? In answering this question candidates will hopefully produce a much more meaningful and pertinent marketing presentation.

A554 Designing Influences

General Comments

The majority of candidates found the paper accessible and were able to attempt all questions. The paper proved successful in discriminating across the ability ranges.

Question 1 – The plastic jug

(a) Where candidates had been well practiced in the skills of product analysis, the identification of three design features was straightforward, and the majority of candidates could correctly identify two or three of the design features of the plastic jug. Handle, spout, and measurements were the most popular responses.

(b) (i) The majority of candidates were able to give one valid advantage of using CAD to design products and a good percentage achieved the full two marks. Common correct answers given by candidates were accuracy, editing and output to CAM. Where candidates did not achieve marks it was usually through confusing CAD with CAM or through providing vague answers such as 'quicker'.

(b) (ii) This question was not answered well by candidates. Many reiterated their answer from the previous question then went on to give an advantage of CAM. The majority of answers did not explicitly state that the CAM and the CAD are digitally linked so that the CAM design can be transferred directly to the CAM machine, reducing the possibility of error and ensuring the manufacture of an accurate product. Most candidates merely stated that CAD designs the product, and that CAM makes it.

(c) Most candidates were able to give an answer realising that manufacture of products in other countries such as China would be cheaper. Without explaining why the products would be cheaper, candidates were unable to achieve above one mark. Candidates should be encouraged to look at the space available for their answer and the mark value shown in brackets.

Question 2 – The fibre optic lamp

(a) This question was well understood by candidates with most achieving the full four marks.

(b) Most candidates were able to achieve the full two marks for this question, with a description of a survey or questionnaire that would find out consumers favourite colour preferences given as the most common correct answer. The question asked for a description of one way a paint manufacturer could find out the most popular colour. A number of candidates mentioned both a survey of customers and a check on what colour was selling best: this is two ways, but could only attract one mark. The second mark could only be earned for a description of how the survey would find out the most popular colour, or how the sales figures would indicate the most popular.

(c) The majority of candidates achieved two or three marks for this question. The most common answers given referred to the change in seasons and the colour association of these different seasons. Often candidates failed to achieve the fourth mark due to repeating the same point in their answer. Candidates should note that a four mark question will require a developed explanation of more than just one point.

Question 3 – The two loaves of bread

(a) This question was well attempted with most candidates being able to identify three design features of the modern loaf that made it different to the 1890s loaf, with most answers referring to the slices and the regular shape. However many candidates made the assumption that the design of the 1890's loaf was in some way inferior. This isn't the case with both supermarkets promoting this style of bread and the growth in sales of 'Artisan' breads. Therefore answers of 'more attractive' were not worthy of credit. Candidates need to ensure that their writing on the spider diagram is clear and legible. The question was asking for features of the modern loaf so only one or two word answers are required for each feature. Explanation and justification of the feature attract no credit in (a) and should be 'saved' for answering part (b).

(b) Explanations of why the features identified in part (a) are popular with consumers were generally well attempted with most candidates scoring two or three marks. Candidates need to be aware that simply repeating the feature again in their answer does not attract any credit and it is the explanation of this feature that the examiner is looking for.

(c) Very few candidates gave an answer that linked to modern production methods. Those that did often gave clear concise answers earning all three marks. Many answers relied upon a repeat of information from parts (a) and (b) of this question about the slicing, convenience and packaging of the modern loaf, rather than explaining why the modern loaf is the shape it is because it is mass produced in tins in very large ovens where machines and computers are involved in the mixing, monitoring, baking, slicing and wrapping: so loaves have to be all the same size and shape. Clearly some candidates were answering the 'changed over time' bit of the stem of the question, instead of the influence of mass production on the shape of the loaf.

Question 4 – Trendsetter and Iconic Product

Philippe Starck was the most popular trendsetter that candidates selected for this part of the question, his work had been well researched and was well represented in many of the answers to this question. Laura Ashley was equally well researched but less popular. There were very few candidates that selected the remaining three trendsetters in their answers.

Responses in part (a) were, on occasions, very comprehensive and wide ranging but all too many were a biography of the trendsetter and not references of their influence on design. Candidates must provide objective details of what the trendsetter did as a designer, not details of when they were born and where they were educated, or any other biographical details that have been learnt from the Internet.

What did the Trendsetter design, why was it different to what had been before, what did people think of the designs of the Trendsetter, what did the trendsetter influence, what do we have today that has been influenced by the work of the Trendsetter, and what is their legacy to the world of design?

This question is designed to assess candidate's quality of written communication. Candidates must demonstrate their use of specialist terms, accurate spelling, punctuation and grammar. Their answer should demonstrate an understanding of the trendsetters influence on modern design and be written in a fluent and coherent style. Points raised by candidates should be exemplified in order to achieve the full marks. Candidates who write simple statements or a bulleted list will not achieve high marks.

(a) This question requires the candidate to say why and how the Iconic Product was influential in the world of product design. Examples are required of what happened or what is still happening in the world of design as a consequence of the introduction of the Iconic product. In preparing for this question, candidates should understand that marks are awarded on 4(a) for information about the Trendsetter and marks are awarded in 4(b) for information about the specific iconic product. Knowledge about the Juicy Salif, Floral Furnishing Fabric and ZX Spectrum gain credit in 4(b). Knowledge of the important influences (other than the given Iconic product) and the long-term legacy of the Trendsetter have to be explained in 4(a).

Question 5 – Design Responses

The kitchen scissors in the style of Philippe Starck proved the most popular design response question, followed by the item of summer clothing in the style of Laura Ashley. Many candidates responded with a wide range of varied and often creative design ideas. Candidates that did not tend to score highly gave ideas that often lacked creativity and concepts were not varied enough from one another. Candidates answering the 'programmable device for switching lights off' question tended to not score as highly, often this was due to a lack of detail of the actual system design.

(a) The majority of candidates scored two or three marks for their specifications and this remains an area that candidates can improve on. For full credit, candidates must provide four discrete points that have not already been given in the question paper, so references to the Trendsetter (in the style of Laura Ashley) will gain little credit. References to the requirements outlined in the need (an item of summer clothing) also gain little credit. Candidates have to use their knowledge of the Trendsetter and the Iconic Product, together with their analysis of the requirements of the need to formulate 'new' points. Generic specification points such as 'must look good' or 'bright coloured' are often too subjective to be able to be used to inform the design process and gain limited credit. Without looking at the design need, the four specification points should clearly define what is required. Some specifications are so vague and generic that they could be for a pair of scissors or a summer dress or a frozen ready meal.

(b) To score well for the design ideas part of the question, candidates must provide a range of different ideas, each with explanatory annotations (rather than just labels), and with some indication that some aspects, of some of the ideas, address at least two of their specification points. Typically, candidates score 3 or 4 of the available marks for design ideas. Pictorial sketches with appropriate colour or shading should be encouraged, as it tends to communicate the thinking of the candidates more fully.

(c) Development at this level requires the competent application of D&T subject knowledge to move a particular idea towards a solution that more successfully satisfies the requirements of the design need and the specification points. This requires much more than just redrawing a previous design idea, making the drawing neater or bigger or just adding colour. This requires analytical thinking and decision making about such aspects as materials/ingredients, sizes/quantities, constructions and finishes, ergonomic considerations, ease of use, cleaning and hygiene, maintenance, durability and life expectancy. Through the use of notes and sketches of little details, the candidate should show how they have considered and refined key aspects of their idea to make it more likely to satisfy the original design need. The presentation of just one well drawn idea, without evidence of any design thinking may qualify for only 1 or 2 marks.

(d) Generally the evaluations were much better this session. Successful candidates identified a specific feature of their design eg rubber handles and explained how the feature meets the specification point eg good grip, easy to use for long periods. Similarly, scissors with a safety lock on the hinge to prevent access to young children, or a hook on the handle so that it can be hung up for convenience and out of reach of children.

Notes that merely state that “the feature satisfies spec point 2” without explaining how the specification point is satisfied, can gain no credit.

Where a specification point refers to comfort and ease of use, the evaluation comment must explain how the feature makes the final idea comfortable and easy to use.

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