GCE Design & Technology

Unit: 9DT01

Pearson Edexcel

Topic: Architecture

Full Portfolio evidence

General Description: In this example the candidate presents 39 slides as part of the submission the candidates appears to have a broad staring point that may have highlighted several exciting possibilities, but they move rather quickly to a specific Rail station.		**Mod Mark**
Grid 1: Investigation **Evidence**	In this section we are expecting to see the candidates exploring a range of pertinent design possibilities that grow out of a clear conversation with a real client or a proven narrative with a target market that has a level of reality therefore mimicking commercial activity. Alongside the client/user groups they need to decide on the potential design possibility that they will be working towards and produce a preliminary design brief. Several design possibilities for initial proposals are undertaken but are a little disparate and some work carried is carried out on target markets and potential client/s. This work does feel slightly contrived in that the main focus already appears to be the rail station. (Slide 3). The questionnaire work is good in identifying the needs of the target market. (Slide 5.) It is a good starting point to look at a broad initial scenario and the 'hone' that to an initial design scenario, but it is a pity that the client feels rather anonymous and fairly quickly moved to the design of a railway station. That said, some of the analysis is relevant and the investigation is sound. This is a level 2 submission.	Level 2
Grid 2: Analysis / Research **Evidence**	At this level, would expect candidates to have clearly identified focused research that it pertinent to their specific design problem that offers clarification or refinement of the needs. This type of research would then focus on the needs and lead into firm technical and measurable specification points. Problem areas are identified, and some analysis is given in order to determine the direction of this project. The candidate conducted relevant research in chosen challenge in terms of the footprint of the proposal with some user group needs and wants and existing products and relevant materials and components (Slide 5) we must be careful here not to award twice. (i.e. Grid 1 and Grid 2) The materials work especially is somewhat rambling and lacked focus and the candidate again seems to have lost sight of client input. This often indicates that the candidate needs to re-engage with the client as is the case here. Some of the footprint work (Slide 13) and commentary is commendable as is the anthropometric data to a more limited extent. (Slides 11-12). Toilet sizing is important but surely platform sizes and concourse footfall for example is imperative and therefore should be in the forefront of the research. The candidate also omits to engage with what would be numerous interested stakeholders. The top of level 2 is an appropriate award.	Level 2

Grid 3: Specification **Evidence**	The candidate submits a re-working of the brief and a specification with bulleted points. This normally does provide some focus for the candidate. However, the specification points are lacking in measurability and have a limited relationship to the research. (Slide 14). We do see some use of the work that the candidate undertook in the research related to materials such as glass and concrete, and this was considered but the overriding factor here is the lack of realistic, technical and measurable specification points. For example, the candidate states " The (information)screens should be big enough," This should be a product of research and should therefore be specific or at least some limits suggested. This would allow for scalability and measurability. The submission is better than basic but is still limited by the lack of data drawn from the research that will influence the reviews and the testing and evaluation. This is a low level 2 specification.	Level 2
Grid 4: Design ideas **Evidence**	In this section we expect to see iterative creative designs that are generated by a range of strategies, that are support by annotation that is research and client led. The candidate does endeavor to use inspiration materials as a design strategy (Slide 15.) with some supporting annotation, it is a little difficult to see how much that this influences the designs of the product but has some merit, for example lighting. The ideas are limited and holistic lacking in detailed sub system. Indeed, the candidate focusses on the overall look rather than any detail. At this stage the client engagement is very limited. We do see some limited detail in terms of floor plan/layout slide 16 and 18 and some technical annotation; the ideas are well presented but the substance is not there to warrant a level three award. The embedded links do help a little in that they are relevant to the scenario, but they are often descriptive not referencing the proposal. There is some third-party feedback with some limited analysis such as on Slide 18. The assessment in this section is at level 2.	Level 2
Grid 5: Development **Evidence**	If candidates are to be awarded marks from the highest level, candidates should demonstrate the application of an iterative approach to design development. This is informed by the application of knowledge of materials and the needs, wants and values of the client/end user along with the use of modelling to test design thinking. The development again lacks real sub system design and has limited client input; we do see some limited materials testing and the candidate thinks about the layout to some extent. (Slide 22) There is some feedback from third parties, but it lacks real substance apart from a reasonable analysis of environmental factors for example Slide 23. It is again difficult to support the centre award the work is better than limited but has only sound elements. The saving grace is the layout work which does have a developmental element to it, and the materials research but the work is level 2.	Level 2

Grid 6: Final design **Evidence**	The key that helps to unlock this assessment criterion is the detail in the candidate's submission that would allow for third party manufacture. There is no real final design in terms of drawings that might enable third party manufacture, some of the CAD work helps a little but again this cannot be in the top level of the assessment criterion. The candidate misses numerous opportunities to evidence detail in terms of individual elements and any real constructional detail. They do try to utilise some calculations to gain an understanding of scale (Slide 27). The work is enhanced by the CAD visualisation and so is better than a basic submission. There is a little help in the manufacturing specification and in the lay planning. Overall, this is a Level 2 submission.	Level 2
Grid 7: Review **Evidence**	In this section candidates should provide an analytical and evaluative commentary on their work, avoiding simple description. A balanced analysis of strengths and weaknesses is essential, considering factors like materials, processes, techniques, and feedback. The client or target market perspective should inform further iterations. Conclusions must be well-supported and fair. Overall, the candidate did undertake reviews during the development phase and in the final design, some of the commentary is relevant and focussed. The analysis on slide 30 does try to point out successes and areas of concern or improvement but in actuality the annotation is largely descriptive. The third-party feedback is a little limiting; however, the submitted evidence does partially analyse the work and there is some evidence of the candidate working on advice given from third parties. This is a solid level 2 submission.	Level 2
Grid 8: Communication **Evidence across portfolio**	We should see in this criterion evidence for each of the strands outlined in the assessment descriptors, but at the highest level the candidates should show a perceptive selection of the communication techniques employed that therefore ensure effective communication. The candidate does evidence all three of the required elements here , the only doubt is the slightly formal/limited sketching technique, which lacks the detail to communicate with real effect.	Level 3
Grid 9: Tools & Equipment **Evidence**	In this section the candidates are expected to demonstrate an accomplished and sophisticated selection and use of tools and equipment which shows and in depth understanding of the materials being used and a justification of their use. The selection of the processes will ensure that the manufacture of the prototype is sound, and the outcome is dimensionally accurate. This is an example of a reliance on single processes such as laser cutting, the candidate suggests cutting the profile by hand also, but it is laser cut. Level 3 (8) Level 3 (7) There is some merit in the fitting of the curved materials, and the 3D printed train does help somewhat. The use of tools and equipment is limited especially as the work is somewhat repetitive, the work here feels better at the lower end of level 3.	Level 3

Grid 10: Quality & Accuracy **Evidence**	In this section it is expected that candidates will produce a working prototype that meets the design specification. The final product will be skillfully made and show an iterative approach to the manufacture. The work is of reasonable quality and has an applied finish, it does have a feeling of a return to client style model, but it is a real pity that more was not made of the interior design as time was spent on layout etc. The train does help a little with scale. The submission is somewhat simplistic with a rather repetitive feel to it and the overall product lacks the complexity required to gain access to the highest levels in this criterion. This is a level 3 submission.	Level 3
4.1 Testing and evaluation **Evidence**	In this section we are looking for the candidate's ability to test and evaluate their final product. Included in this could be referencing further developments, showing specific tests and justifying their outcome with the clients' needs and wants. There is some testing and evaluative commentary, the candidate does do some day night testing but as the client/ stakeholders are largely anonymous the evaluation commentary is not well informed. This lack of client/stakeholder engagement is significant Some of the commentary is also slightly confusing for example moral impacts on slide 38 regarding the heat gun. This is a level one award not a level two submission as the work submitted lacks real analysis, for example the candidate describes ethical aspects of train stations with no referral to the project. Overall, the candidate does not analyse the product they merely describe it.	Level 1
Total	**This is a C/D borderline case.**	**D Grade**