



Moderators' report

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OCR Level 1/Level 2

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R060-R070 Summer 2025 series

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Introduction

Our Moderators' reports are produced to offer constructive feedback on centres' assessment of moderated work, based on what has been observed by the moderation team. These reports include a general commentary of accuracy of internal assessment judgements, identify good practice in relation to evidence collation and presentation, and comment on the quality of centre assessment decisions against individual Learning Objectives. The report also highlights areas where requirements have been misinterpreted and provides guidance to centre assessors on requirements for accessing higher mark bands. Where appropriate, the report will also signpost other sources of information that centre assessors will find helpful.

OCR completes moderation of centre-assessed work in order to quality assure the internal assessment judgements made by assessors within a centre. Where OCR cannot confirm the centre's marks, we may adjust them in order to align them to the national standard. Any adjustments to centre marks are detailed on the Moderation Adjustments report, which can be downloaded from Interchange when results are issued. Centres should also refer to their individual centre report provided after moderation has been completed. In combination, these centre-specific documents and this overall report should help to support centres' internal assessment and moderation practice for future series.

Online courses

We have created online courses to build your confidence in delivering, marking and administering internal assessment for our qualifications. Courses are available for Cambridge Nationals, GCSE, A Level and Cambridge Technicals (2016).

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All teachers delivering our Cambridge Nationals suite are asked to complete the Essentials for the NEA course, which describes how to guide and support your students. You'll receive a certificate which you should retain.

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These self-paced online courses are intended for any teachers. During the course, you will engage with interactive content on subjects such as guidance on unit content, structure and administrative processes.

If you have any queries, please contact our Customer Support Centre on 01223 553998 or email support@ocr.org.uk.

Unit R060 General overview

This is a mandatory NEA unit for the qualification. Candidates work through an OCR set NEA assignment brief that changes every year. The NEA is valid for the January and May series with the new NEA released at the end of June for candidates to work through for the following January and May series. Centres are reminded that they cannot use for example, the NEA for January and May 2025 for the January/May 2026 series. Therefore, for the January/May 2026 series, centres must use the NEA released on the 1st June 2025.

Spreadsheet applications are commonly used to create input, processing and output solutions which manipulate data. Candidates are required to plan and design a spreadsheet solution to meet client requirements. They must be able to use a range of tools and techniques to create a spreadsheet solution that is based on their design and conduct testing of the solution to confirm functionality. Candidates are then required to evaluate their solution based on the user requirements.

Centres are reminded that submissions for this unit require teachers to provide comments on the URS document that justifies why they are awarding the marks for each task and these URS forms must be submitted with candidate evidence. It is also important that the marks on the URS are checked carefully and that the evidence that is linked to these marks are submitted as part of the sample. In addition, it is extremely important that centres make sure that the total marks are checked and that the correct marks are submitted to OCR.

It was noted during the January/May series, that there were a significant number of centres who had to be contacted due to clerical errors, where the marks on the URS did not tally with the overall mark claimed for candidates. This results in the OCR moderator and OCR moderation team having to email centres to request a check of the clerical error and remedial action being taken by the centre. A number of centres had to be contacted several times by the OCR moderator and/or moderation team before the issue was addressed. This can significantly delay candidate results as the OCR moderator cannot complete the moderation of the centre submission until the clerical errors have been addressed.

There is clear guidance within the NEA of the evidence that should be submitted by candidates for each task including the actual completed spreadsheet solution. A number of centres had to be contacted due to missing candidate work and on occasions, had to be contacted several times before the evidence was provided. This again can significantly impact the timing of results as the intention is always to not disadvantage candidates by adjusting marks due to missing evidence within a submission.

Centres should respond promptly to any issues raised by the OCR moderator and moderation team to make sure that candidates receive fair and accurate marks when the results are released. In addition, centres are reminded that the submission must be in digital format and that any paper-based evidence or URS documentation cannot be accepted.

When uploading evidence or submitting via a USB drive, it is important that each candidate folder is in the format of: CentreNo_CandidateNo_Series_Unit_Marks. Some centres were submitting candidate evidence where a specific candidate folder referenced for example, a One-Drive reference number. This is unacceptable and the correct folder naming convention should be applied. In addition, it is important that the folders only contain the evidence stipulated for each task. There were a number of occasions, where a candidate's folder contained the NEA assignment brief, supplied assets and multiple versions of documents. The evidence to be submitted must only be the final evidence that was marked by the teacher and nothing else. In addition, the spreadsheet must be made available for moderation as screenshots are not acceptable.

Comments by Task

Task 1 – Planning and designing a spreadsheet solution

There was an improvement seen for the completion of this task by many candidates. It was noted that previous guidance as to what should be considered when awarding marks for each strand had been taken into consideration. 1a relates to the use of design tools when planning and 1b relates to the level of detail within the design tools in relation to the design of the spreadsheet solution, design of the HCI and design of the outputs. For 1b it is important that consideration is given into whether a third party could develop the spreadsheet solution, HCI and outputs based purely on the level of detail provided. There were still some centres who were not taking each strand separately when awarding marks and therefore occasions where the marks given were too generous or too harsh.

1a: use of design tools when planning

When awarding marks, it is important to not only review what design tools candidates have used for planning but also how they have used them. Planning is the first step of the design process involving consideration for the organising, outlining and co-ordinating of the solution. At this stage it is not based on the overall content of the design as this is 1b, but the way the candidate has planned the solution by ensuring they understand the client requirements and what the intended outcome is. It should also include the identification of the software, assets and design tools they are going to use, when they are going to conduct testing and the order in which they will conduct tasks. It was noted that as part of their planning, candidates had merely copied and pasted the requirements from the NEA assignment brief. This is not confirming that candidates actually understand the requirements. There were some very good examples seen, where candidates had actually gone on to annotate further each of the requirements as to what it meant and how they were going to address it. This aided candidates when they selected the use of design tools such as mind maps, flow diagrams and wire frames, etc. When awarding marks for the use of the design tools (it is not the content at this stage), it is about how they have used a particular design tool and its associated features as well as whether it is fit for purpose.

1b: design of spreadsheet solution, output(s), HCI

When considering the mark band and associated marks for strand 1b, it is important that teachers consider not only what design tools and features the candidate has used, but also how well they have documented the design requirements for every aspect of the solution. The question of whether a third party could design the solution without asking questions is a good indication as to how well the candidate has designed the solution to meet client requirements. Things to consider are:

- a) has the candidate used appropriate design tools for each aspect of their design, e.g. use of flowcharts to show different functionality requirements?
- b) has the candidate included the design requirements for every aspect of the solution for the client, e.g. what formulae they are going to use and what the formulae will contain (candidates should not be attempting to provide cell references but more of a pseudo code), what output(s) they are going to produce, etc?
- c) has the candidate designed an HCI that allows a user to interact with the spreadsheet solution in a clear and effective way?

When considering these different areas, a decision has to be made as to whether the design documentation is effective, adequate or limited and then where within the mark band marks can be given.

Candidates who provided the level of detail required, easily achieved marks that were fully justified within MB3. There were still some centres who were too generous with the marking for this strand where the level of detail was lacking and not all requirements were covered. This should result in marks being given in Band 2 at best.

While design documentation can be hand drawn or produced digitally; it is important that the OCR moderator can access them. Some centres submitted files that used specialist software resulting in being contacted to provide the evidence in an accessible format, e.g. use of Visio files being converted to pdf. In addition, it is important that any images of handwritten designs and/or digital designs are of an appropriate size and can be viewed clearly by the OCR moderator.

1a: Evaluating the effectiveness of the design tools used by candidates



There are a number of points that can be considered when awarding marks for strand 1a.

Purpose:

- does the tool **suit the purpose**? For example, mind map for creating ideas, flowchart for formulating the logic flow of the processes, wireframe for designing the interface layout
- does it reflect the requirements and intention for the NEA assignment context?

Clarity/readability:

- are the design tools visually clear and easy to understand?
- is the layout clean (tidy) and logically structured?
- are any labels, icons, connectors used appropriately?

Coverage/completeness:

- are all the components and/or steps included?
- are there any gaps or missing elements?

Logical structure/flow:

- does the tool show a clear structure? e.g. organised hierarchy in a mind map, logical progression in a flowchart.
- are the relationships between the elements represented?
- is the user journey or user interaction (UI) flowing logically and efficiently documented in the wireframes?

Creativity and problem solving:

- has the candidate used the tools to explore ideas in a meaningful and creative way?
- is there evidence of innovation and good design ideas?

Appropriate use of the tool's features:

- mind maps – are branches meaningful and hierarchy used well? Are the topics logically grouped?
- flowcharts – are processes, decisions and outcomes clearly differentiated with the correct use of symbols?
- wireframes – are interface elements correctly used and visual hierarchy clear? Can the layout and interface intentions be easily interpreted?
- visualisation diagrams – are visual elements such as charts intuitive?

Communication:

- does each tool communicate the idea of the design to others effectively?
- would someone unfamiliar with the purpose of the solution understand what is intended?

1b: Evaluating the appropriate level of detail candidates have included in their planning and design documentation



When evaluating the effectiveness of the level of detail included within the planning and design documentation it is important to consider the depth and relevance.

Relevance of detail:

- are the details directly relevant to the creation of the spreadsheet solution?

Depth versus breadth:

- is there a good balance between covering the major aspects (breadth) and drilling down into the key areas (depth)?

Specifics:

- are the elements described with specific and actionable content?
 - mind map(s): are any ideas broken down into meaningful sub-ideas?
 - flowcharts: are the steps clearly defined or are they vague?
 - wireframes: is there specific labelling of the elements?

Completeness of logics and processes:

- is the entire workflow and user experience mapped out?
- has error handling been considered or alternatives?

User/client needs reflected:

- has the design considered the user's perspective and addressed their needs in appropriate detail?
- does the level of detail support decision-making for the client?

Supporting solution development:

- does the level of detail help towards creating the solution?
- are technical, functional and design considerations clearly defined?
- does the user experience/use journey include the functional design of the solution, the system outputs and the HCI?

Misconception



1a and 1b are two different strands and should be marked based on the requirements for each strand.

- 1a: use of design tools and features when planning
- 1b: design of spreadsheet solution, output(s) and HCI

Teachers sometimes confuse the content of the design with the planning stage.

Task 2 – Creating the spreadsheet solution

As with Task 1, this task also comprises two different strands:

2a: Using tools and techniques to create the solution

2b: Creating user interaction, processes generating accurate and quality data, presentation of information

Teachers are required to look at each strand individually when determining the marks to be given. A candidate may achieve more marks for one strand than the other. It was noted that there was an improvement in the number of candidates producing good quality solutions that reflected the user requirements as stipulated in the NEA assignment.

While many candidates produced good spreadsheet solutions, there was still a number of candidates who were given inflated marks when there were a number of issues such as errors and inefficiencies within the spreadsheet model.

For strand 2a, teachers should be considering how the candidates have used the tools and features within the spreadsheet software as well as the techniques implemented to get the results. There are still some candidates who do not understand the difference between data validation and security of data. Candidates would use the given password to protect the spreadsheet solution with respect to access and assume that this was data validation. This is not only a skills requirement but a knowledge requirement that candidates need to know and understand for R050.

In addition, there were some candidates who password protected each worksheet as opposed to just the entire solution and possibly protecting individual cells that contain formulae. Protecting the different worksheets is not effective and this would not allow a user to make new entries or make changes, e.g. price changes, etc.

For 2b: It is advisable to consider each of the bullet points within the mark scheme as follows:

- inaccurate data where incorrect formulae had been used or incorrect cell references used within the formulae. Some candidates had used appropriate formulae concepts but their results were incorrect as they had used incorrect data (cell references). Candidates who do not understand how these calculations would be carried out manually, struggle to identify the relevant cell references.
- lack of use of formulae with calculations performed outside of the spreadsheet solution and manually input. The purpose of the spreadsheet solution is to develop an automated system that will automatically calculate and update data. While the majority of candidates did do this and, in many cases, highly successfully, there were some candidates who had manually input the results and therefore any changes to the data would not be reflected. This resulted in some instances where candidates were placed in Band 3 when their solution was either limited or adequate depending on what else they had achieved.
- misinterpretation of the requirements, e.g. while some candidates within their design documentation did accurately stipulate how the discount would be applied for those customers hiring the car for three or more days accurately, they did not apply this when inputting the formulae. These candidates tended to give a discount on the entire cost of the car hire which was incorrect.
- some candidates misinterpreted the increase in car hire by £5. These candidates tended to add £5 on to the total cost already calculated for the car hire and extras. This is incorrect and they should have increased each individual car hire cost by £5 and show what this increase in value would mean to the total overall cost for the customer. There were a number of cases where candidates did this well. There were other examples where candidates input the price increase per car hire cost but did not take the calculations any further.

- applying protection using passwords to cells containing formulae to prevent accidental changing or deletion. There are still many candidates that password protect entire worksheets where the end user would be expected to enter data and this cannot therefore be deemed effective.
- there was a big improvement in the creation of the charts, with moderators noting more appropriate charts being created that were correctly labelled. Some candidates however, submitted poorly designed charts with a lack of labelling of x and y axis and no chart title and/or legend. A number of candidates also included total values as well as individual values which is incorrect for the NEA assignment brief provided.
- how effective is the user interaction when using the solution to meet the needs of the client requirements?
 - is the HCI intuitive?
 - can the user readily find the return button or do they have to scroll around the worksheet to find it?
 - do all the links work to each worksheet and back to the home page?
- has the candidate used efficient processes to produce data that is of good quality and accurate?
- does the presentation of the information provide a clear message and is it relevant to the requirements of the client?
- has the candidate implemented any form of data integrity? The number of different data integrity techniques they use also determines the mark band they would be placed in for this particular requirement.
- has the candidate used the solution to fully develop the future predictions, which in the case of this NEA was in relation to price increases of each individual car hire cost.

A candidate may be placed in different mark bands for the different assessment points to be covered and therefore a best line of fit is applied, e.g. a candidate may be Band 3 for the user interaction, Band 2 for the presentation of information and Band 1 for the processing of information to produce high quality and accurate data.

More candidates produced more than one chart and list and overall these were meaningful and clear to understand. This is one of the key requirements for the NEA.

There were occasions where candidates were given higher marks when their solution was clearly inaccurate and, in some instances, did not reflect the design documentation they had prepared.

Misconception

Teachers sometimes confuse the use of tools and features within the software and the actual development of the spreadsheet solution.

2a and 2b are two different strands and should be marked based on the requirements for each strand.

- 2a: use tools and techniques to create the solution
- 2b: creating:
 - user interaction with the spreadsheet
 - processes generate accurate and quality data
 - presentation of information

Task 3 – Testing and evaluating a spreadsheet solution

There are two aspects to this final task. The test plan and evidence of testing followed by the evaluation of the effectiveness of the spreadsheet model against client requirements.

Candidates are provided with a test plan with a series of tests that must be completed during and after the development of the spreadsheet solution. While candidates may include extra tests, they cannot be accredited with extra marks.

This is still a weak area for many candidates although some improvement was seen. There were instances where candidates claimed successful testing for some areas when their solutions were not fully completed and therefore testing would have been impossible. Other candidates misunderstood what the actual tests were requiring.

A well-documented test plan will include what test data will be used. An example is when confirming the correct result of a calculation such as the correct charge for car hire for customer 102. The expectation is that candidates will include the manual calculation they have used to establish what the income should be and compare this with what the spreadsheet solution is presenting as the result. This would help candidates identify if there was an issue with the formula that they had used. A large number of candidates stated that they would “look across the row for customer 102 and see that the value is £x”. This is not testing, this is looking up a value and they had no way of knowing whether the answer was correct or not.

Some candidates were perfectly honest and identified that there was a problem but they either ran out of time or still could not rectify the solution. This is still classed as good documenting of a test.

In addition, where a test has failed, the expectation is that the candidate will provide evidence of re-testing. An effectively documented test plan would help a third party to not only know what tests to conduct but also what to use as test data, how to use the test data as well as the expected and actual results.

Unfortunately, there are still candidates who will repeat the wording of the expected results and actual results or for actual results simply state “ok” or “as intended”. This is not effective documentation of testing and it is important that candidates understand how to document tests on a test plan as it is also a knowledge requirement within R050.

There were, however, some very good examples of test plans provided by a number of candidates.

Assessment for learning



It is important that candidates understand the difference between test data, expected results and actual results when documenting tests in a test plan.

Test data: it helps makes tests repeatable and measurable. It refers to the specific input or data required to perform a test.

Expected results: this is the predicted outcomes based on things such as the design specification, the requirements and/or functionality. It should reflect what should happen when a test is carried out. Expected results should be written before any testing is carried out and therefore could be identified and documented during the planning stage (even though further tests may be added).

Actual results: these are the outcomes from testing and should describe clearly what actually did happen when the test was conducted.

The final strand is for the evaluation of the effectiveness of the spreadsheet solution against the client requirements. Many candidates while 'writing a lot' either identified what they did and did not do (Band 1) or described what they did (Band 2). This is not a comprehensive evaluation and yet many candidates had been given inflated marks. To achieve marks in Band 3, candidates should be explaining why what they have produced is effective in relation to the user requirements.

There are still some candidates (who may have completed R070 first), who reviewed the tools they used and processes as opposed to how effective their solution was against client requirements. This is incorrect and not required.

The evaluation covers two distinct areas, the effectiveness of the overall solution when meeting the client requirements and the effectiveness of the HCI for the user interaction with the solution. Some candidates tended to refer to the effectiveness of the HCI in great deal but lacked the same breadth and depth when referring to the effectiveness of the overall solution.

Unit R070 General overview

This is a mandatory NEA unit for the qualification. Candidates work through an OCR set NEA assignment brief that changes every year. The NEA is valid for the January and May series with the new NEA released at the end of June for candidates to work through for the following January and May series. Centres are reminded that they cannot use for example, the NEA for January and May 2025 for the January/May 2026 series.

The unit aim is for candidates to learn the basics of Augmented Reality (AR) and how to create an AR model prototype to showcase how it could be used for a defined target audience to support the presentation of information. Candidates learn the purpose, use and types of AR in different contexts and how they are used on a range of digital devices. Candidates develop skills to help them to plan, design and create AR model prototypes using a range of tools and techniques. They learn the importance of iterative testing and follow this process to test their prototype during development. They review the processes they followed to develop the AR model prototype and consider where they could improve and/or what they could do differently when developing future models.

Centres are reminded that submissions for this unit require teachers to provide comments on the URS document that justifies why they are awarding the marks for each task and these URS forms must be submitted with candidate evidence. It is also important that the marks on the URS are checked carefully and that the evidence that is linked to these marks submitted as part of the sample. In addition, it is extremely important that centres make sure that the total marks are checked and that the correct marks are submitted to OCR.

It was noted during the January/May series, that there were a number of centres who had to be contacted due to clerical errors, where the marks on the URS did not tally with the overall mark claimed for candidates. This results in the OCR moderator and OCR moderation team having to email centres to request a check of the clerical error and remedial action being taken by the centre. A number of centres had to be contacted several times by the OCR moderator and/or moderation team before the issue was addressed. This can significantly delay candidate results as the OCR moderator cannot complete the moderation of the centre submission until the clerical errors have been rectified.

In addition, there are still centres submitting evidence for the prototype that is not in a video format of the entire demonstration of the AR model prototype. Some centres, while submitting video evidence, submitted it as a series of small video clips or else providing the file from the SDK used. This is not appropriate. Moderators are not required to have specific SDK software on their systems. Also, QR codes cannot be used as there can be instances where these do not work. There are also some centres who were providing links to the centre's One-Drive, etc. This is also not acceptable as centre systems will not permit external personnel with access. Candidates are required to provide a full demonstration of the prototype and should be encouraged to take their time and clearly demonstrate how it will function, the user interaction and the user experience. It was pleasing to note that there were some centres that had complied with this and their candidates produced carefully recorded videos with some of them providing narratives (although that is not required).

A number of centres had to be contacted due to missing candidate work and on occasion, had to be contacted several times before the evidence was provided. This again can significantly impact the timing of results as the intention is always to not disadvantage candidates by adjusting marks due to missing evidence within a submission.

Centres should respond promptly to any issues raised by the OCR moderator and moderation team to make sure that candidates receive fair and accurate marks when the results are released. In addition,

centres are reminded that the submission must be in digital format and that any paper-based evidence or URS documentation cannot be accepted.

When uploading evidence or submitting via a USB drive, it is important that each candidate folder is in the format of: CentreNo_CandidateNo_Series_Unit_Marks. Some centres were submitting candidate evidence where a specific candidate folder referenced for example, a One-Drive reference number. This is unacceptable and the correct folder naming convention should be applied. In addition, it is important that the folders only contain the evidence stipulated for each task. There were a number of occasions, where a candidate's folder contained the NEA assignment brief, supplied assets and multiple versions of documents. The evidence to be submitted must only be the final evidence that was marked by the teacher and nothing else.

Centres are also reminded that the candidates should be following the client requirements that are within the assignment brief. For example, candidates were asked to include the assets for all four quiz topics but only implement triggers and layers for one topic for demonstration purposes. A small number of candidates only showed the one topic option and not all four.

There were many candidates who provided an effective AR model prototype that met the client requirements. Some candidates included extra assets that they felt made it more interesting. Candidates cannot be given extra marks for this and it is important that this also does not impact on the time they have available.

One of the key issues was where candidates had not considered the size and rotation of the screen and therefore in order to demonstrate their model prototype, they had to keep moving the screen. In some cases, this made it difficult to see where wrong and right answers were being indicated. In addition, this has an impact on the overall user experience.

Comments by Task

Task 1 – Designing an Augmented Reality (AR) model prototype

There are two strands within this task as follows:

2a: Use of design tools and features when planning

2b: Planning and designing to include the planning and designing documentation

There are still some centres that are not looking at each strand individually when marking candidate evidence and therefore the marks given can either be over-generous or too harsh.

2a: Use of design tools and features when planning

2a relates to how the candidate used the design tools and features when planning their AR model prototype. It is important to consider how well they have used them and those that they have used are fit for purpose. While many candidates made good use of the design tools and the associated features, there were some candidates that tended to include some things that had no relation to the actual NEA assignment brief. Some candidates were given inflated marks when they had not used the correct conventions for using the tools, e.g. flowcharts with no arrows, start, end or decisions.

2a: Evaluating the effectiveness of the design tools used by candidates

There are a number of points that can be considered when awarding marks for strand 1a.

Purpose:

- does the tool **suit the purpose**? For example, mind map for creating ideas, flowchart for formulating the logic flow of the processes, wireframe for designing the interface layout
- does it reflect the requirements and intention for the NEA assignment context?

Clarity/readability:

- are the design tools visually clear and easy to understand?
- is the layout and clean (tidy) and logically structured?
- are any labels, icons, connectors used appropriately?

Coverage/completeness:

- are all the components and/or steps included?
- are there any gaps or missing elements?

Logical structure/flow:

- does the tool show a clear structure? e.g. organised hierarchy in a mind map, logical progression in a flowchart
- are the relationships between the elements represented?
- is the user journey or user interaction (UI) flow logically and efficiently documented in the wireframes?

Creativity and problem solving:

- has the candidate used the tools to explore ideas in a meaningful and creative way?
- is there evidence of innovation and good design ideas?

Appropriate use of the tool's features:

- mind maps – are branches meaningful and hierarchy used well? Are the topics logically grouped?
- flowcharts – are processes, decisions and outcomes clearly differentiated with the correct use of symbols?
- wireframes – are interface elements correctly used and visual hierarchy clear? Can the layout and interface intentions be easily interpreted?
- visualisation diagrams – visual sketch or mock-up of the prototype

Communication:

- does each tool communicate the idea of the design to others effectively?
- would someone unfamiliar with the purpose of the solution understand what is intended?

2b: Planning and designing

This relates to the content of the planning and design documentation. When considering the mark band and associated marks for strand 2b, it is important that teachers consider the depth and breadth of content within each of the documentation. The question of whether a third party could design the AR model prototype without asking questions is a good indication as to how well the candidate has designed the prototype to meet client requirements. Things to consider are:

- does the planning documentation include an analysis of the user requirements, how the user requirements will be met as well as an explanation of what these user requirements are?
Candidates cannot be given marks for merely copying and pasting the user requirements from the assignment brief or user requirements document.

- has the candidate considered what assets, triggers and layers they will use and how they will use them?
- has the candidate considered the user experience to include the interaction with the AR prototype along with the device(s) it may be used on, the screen size and the orientation of the screen?
- does the design documentation cover all aspects of the AR model prototype and include the technical development aspect?

When considering these different areas, a decision has to be made as to whether the design documentation is effective, adequate or limited and where within the mark band marks can be given.

There were a number of candidates who did not provide evidence of planning but only the use of the design tools for the design of the prototype. This is insufficient to award marks in Band 3. Although planning and designing are closely related, they serve different purposes. Planning involves what needs to be done, why, when and how. Designing is about the creation of the structure and look of the prototype.

There were, however, some very good planning and design documentation submitted by candidates which justified the mark band and associated marks they were given. This improvement was noticeable from previous series where the detailed planning documentation and design documentation demonstrated the candidates' thoughts processes and considerations as well as detailed technical requirements to achieve the overall purpose. Some candidates had used a number of design tools such as mind maps, flowcharts and visualisation diagrams, but the level of detail was lacking, especially in relation to the technical aspect and therefore Band 2 would be deemed more appropriate.

While design documentation can be hand drawn or produced digitally; it is important that the OCR moderator can access them. Some centres submitted files that used specialist software resulting in being contacted to provide the evidence in an accessible format, e.g. use of Visio. In addition, it is important that any images of handwritten designs and/or digital designs are of an appropriate size and can be viewed clearly by the OCR moderator.

2b: Planning and designing: content of the planning and design documentation



There are a number of points that can be considered when awarding marks for strand 2b.

Purpose, user requirements and target audience:

- **Purpose of the AR model:**

What is the AR experience trying to achieve? (e.g., visualising a product, educating users, guiding them in a space)

- **User requirements:**

- What do users need from the experience? Consider:

- accessibility (e.g., simple navigation)
 - usability (easy to trigger, clear feedback)
 - speed or performance expectations

- **Target audience:**

- who is using the AR experience? Consider:

- age group
 - technical experience level
 - interests and expectations
 - language and cultural factors

- **Device considerations:**

- screen size
 - orientation
 - device type

- **Content, assets, triggers and layers:**

- what will users see?
 - what assets will be used?
 - what triggers will be used?
 - what layers will there be?

- **User interaction:**

- what interaction will be used?
 - what feedback will be provided to the user, e.g. visual cues, sounds and/or prompts?

- **User journey:**

- how will the user start?
 - what will they do during the experience?
 - how do they finish or reset?

- **Design Tools and how they were used:**

- mind maps - generating initial ideas
 - flowcharts - map out user flow, triggers, and decision points for user journey
 - wireframe – user interaction (UI) planning
 - storyboard – visual flow of the key stages of the user experience

Task 2 – Creating an Augmented Reality (AR) model prototype

Centres are reminded that candidates are required to submit video evidence demonstrating the entire AR model prototype they have created. QR codes, links to websites, and screenshots are not acceptable forms of evidence. Also, it is not necessary for candidates to provide short videos for each aspect of the creation of the prototype or when completing the testing task. These individual videos impact on the time available to candidates and cannot be used by the OCR moderator to confirm the marks given for this task. Also, centres are reminded, that teachers should be reviewing the video evidence of the entire prototype when awarding marks. There were a number of centres where OCR moderators had to request the video evidence. Candidates should also be advised that they need to take their time when demonstrating their product and not click on all assets at the same time. They should demonstrate it the way they would demonstrate it to a client. There were a number of candidates who provided very good video evidence that clearly showcased their AR model prototype. Some candidates also provided their own commentary to help explain how it would function. Audio commentary is not a mandatory requirement, however. In a minority of cases, some candidates misunderstood the requirement and presented video evidence where they were demonstrating how they used the SDK to create the prototype. This is not what is required and without the correct video demonstration, candidate marks could be seriously affected.

OCR moderators reported seeing some very good examples of the AR model prototype. This was invariably from candidates who had conducted careful planning and design within Task 1 and followed this through to the creation of the prototype. Centres are reminded that candidates are free to add extra assets if they require, but they cannot be given extra marks.

Some candidates had misinterpreted the requirement to just use one topic to show the functionality of the entire process and therefore did not include the Quiz Time banner or start button. Some candidates did not animate the start button in circumstances where they could not/did not use the animated gif file.

Some candidates changed the assets they were using for their own. This is acceptable as long as it does not impact on the time they have available. One of the main issues was with the sizing and positioning of the A, B, C and D buttons as well as the correct and incorrect signs. There were occasions where these were not consistently placed within a question or across the questions and this can potentially have an impact on the overall user experience as they would have to take time looking at where the buttons had been placed or not be able to see the results of clicking any of the answers. Issues such as these can prevent a candidate being given high marks within Band 3.

It was noted that many candidates did not consider the mobile technological device that the AR app would be used on. This included the screen size and orientation. This was especially apparent for those candidates who used mobile devices to record their demonstration or the mobile device emulator in the selected SDK. It became apparent that the display of the assets was too large for the screen size of the device and that the orientation was also not appropriate, with candidates having to pan across the assets so that they could be seen. These issues have an impact on the overall user experience and therefore candidates cannot be given the higher marks in Band 3 for this aspect. This is why it is important that candidates have had the opportunity to practice developing AR resources for use on mobile devices so that they gain a better understanding of how assets should be placed and re-sized, etc.

There are two strands to this task as follows:

3a: using tools and features for the creation of the prototype and incorporating user interaction

3b: presentation of information to the audience, quality of the information presented and the user experience

When marking the evidence teachers should consider each strand separately. A candidate may achieve higher marks for the use of the tools and features within the selected SDK and implemented good user interaction, however, due to the lack of consideration in other areas, the presentation and quality of the information may not be effective and the user experience flawed.

Task 3 – Testing and reviewing

There are two distinct activities for this task:

4a: Testing

4b: Review of:

- the effectiveness of the processes followed for design and creation
- the effectiveness of tools and techniques during design and creation

4a: Testing

Unlike R060, candidates have to identify their own tests. The testing required is purely technical testing. Some candidates did include user testing as well, but this is not required and candidates should not be given extra marks.

Testing is supposed to be iterative testing and it was noted that most candidates had only conducted end testing. Candidates could start to develop their test plan during the planning and design stage. They will have identified what it is they want to do, so they can then enter onto their test plan the tests they want to conduct.

Candidates are not required to provide screenshot or video evidence of testing but the majority of candidates chose to include them. The documenting of the tests was still weak for many candidates as they may have stated what they were testing but did not state fully how they were going to carry out the tests. Candidates should also be encouraged to test how the AR model prototype would function on a mobile device. This would give them an early indication as to whether the assets can be viewed correctly or are too large for the screen, whether the screen looks too cluttered and where appropriate any written information can be read by the user.

There are still many candidates who will either repeat the same comment for expected results and actual results or will just say “ok” or “as intended”. This is not the correct way to complete a test plan. It is important that candidates understand how to complete a test plan appropriately as this is also a key knowledge area within R050.

Assessment for learning



It is important that candidates understand the difference between test data, expected results and actual results when documenting tests in a test plan.

Test data: it helps makes test repeatable and measurable. It refers to the specific input or data required to perform a test, for example, user selects a wrong answer for Question 1, B, C, D.

Expected results: this is the predicted outcomes based on things such as the design specification, the requirements and/or functionality. It should reflect what should happen when a test is carried out. Expected results should be written before any testing is carried out and therefore could be identified and documented during the planning stage (even though further tests may be added). An example would be, when clicking on buttons B, C or D a red cross should appear indicating that a wrong answer has been selected for Question 1.

Actual results: these are the outcomes from testing and should describe clearly what actually did happen when the test was conducted, for example, a red cross appeared when button B, C, D was selected.

4b: Review of:**a) Effectiveness of the processes followed for design and creation****b) Effectiveness of tools and techniques during design and creation**

If centres have submitted for candidates to complete R060 first, then candidates are tending to be encouraged to complete an evaluation. This is incorrect as for R070, the requirement is for candidates to conduct a review of the processes they followed as well as the tools and techniques used. The review should start with the planning and design process, through to creating the AR model prototype.

There were a number of candidates who did a good review where they explained the effectiveness of the various processes they followed and the tools and techniques used and how the processes and use of the tools and techniques helped them. Candidates also explained where they could have made better use of them. This justified the marks given within Band 3.

However, some candidates focused on the effectiveness of the tools and techniques (the second strand) and did not explain the effectiveness of the processes they followed when designing and creating. Therefore not all aspects were covered and therefore they should not have been given marks within Band 3.

A number of candidates were given inflated marks when they merely stated what they did (or did not do) to create the AR model prototype to meet client requirements. This is only mark Band 1. Some candidates did provide a description of what they did and why this was effective which is Band 2.

When awarding marks, it is important to review the definitions of the associated command verbs within the appendix of the qualification specification.

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