AQA

A-LEVEL
Geography

7037/C Independent Fieldwork Investigation
Report on the Examination

7037
June 2018

Version: 1.0

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General

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It is pleasing to report in this first year of the new specification that the quality of teacher assessment was generally of a high standard and it was encouraging to see that the overwhelming majority of centres approached this component with utmost professionalism. Most centres demonstrated a secure grasp of the mark scheme and were able to apply it appropriately to their students' work. A minority found it difficult to tease out the finer points in the strands and levels of the assessment criteria. It was clear from the samples sent for moderation that the titles developed by students were firmly rooted in the specification and were generally fit for purpose.

There were many high quality investigations, which reflected well upon the quality of teaching and hard work of the students. In many instances there was evidence of good planning followed up by purposeful fieldwork, incorporating all stages of the route to geographical enquiry. A variety of methods of data collection were used, and they were almost always appropriate to the study being undertaken. The results of this work were processed well and presented clearly using a variety of techniques. The outcomes were then analysed in relation to theory and the initial question(s) or hypothesis(es) posed, with clear conclusions from them, along with a sound evaluation.

Centres should be commended on the wide range of impressive work covering different areas of the specification. Many students/centres followed well-worn pathways but there were also numerous innovative and fresh perspectives on new themes. The changing places part of the course yielded some excellent investigative studies, often linked with elements of contemporary urban environments. Studies of coastal landscapes, systems and management were also popular as were ecological investigations focusing on plant succession and diversity usually in a sand dune environment. Water and carbon cycles provided the basis of many high quality local investigations. Rather less frequently, students chose to develop titles based on glacial processes and landforms, flood hazards, local aspects of globalisation, population, migration and resource security, and across the entry virtually all potential themes contained within the specification pertaining to fieldwork were explored. The strongest work was often produced by students who developed an evaluative question as a title, with no more than 3 sub questions or hypotheses that were closely related to each other. Very often the most outstanding studies were from students who were pursuing themes that had really ignited their interest during their A-level Geography course, as their passion for the subject shone through.

On the whole, assessment within centres was fair and accurate. Most centres were proficient and professional when evidencing the awarding of levels and marks, with comments on the students' work reflecting where credit was being given. Effective annotation, both on the Student Record Forms and within the reports, greatly facilitates the moderation process. It is often sufficient to signpost the areas and strands of the mark scheme using abbreviations and brief comment based on the assessment criteria (eg 1a L4). Conversely there were some examples of work where there was little evidence of either marking or annotation. It is a requirement that before the work is sent for moderation there should be a clear indication on the script where the marks have been allocated. For a minority of centres, merely placing several ticks on a page or writing excellent work did not help the moderation of a student's work.

Internal standardisation generally proved effective at removing inconsistencies and improving the accuracy and application of the assessment criteria when carried out effectively. In some cases however this process needs attention. On occasions where there was more than one teacher

assessor there was evidence that meticulous and rigorous internal moderation didn't take place before the sample was sent to the external moderator.

The majority of Student Record Forms were completed in full. The better student proposals were clearly articulated, with appropriate titles, methodologies and sampling strategies. Most centres provided effective and realistic general guidance so that students could develop their investigations individually. Under the new regulations centres are challenged to find the right balance between supporting the students, whilst also enabling them to take control and demonstrate independence.

In a few instances teacher guidance on the CRF was too specific, and conversely there were cases where the title was simply approved without any written general advice or direction.
Not surprisingly a mix of different practices was demonstrated by centres as they facilitated the work of their students. Some allowed freedom to select titles and environments which enabled students to collect information in their own time, whilst ensuring that the work was carried out safely. Others arranged for students to work in small groups on similar themes, once they had submitted their proposals for independent work. A wide range of approaches such as these is acceptable, and much depends on the practicalities within the school or college.

Centres are advised to ensure that all their students keep to the word guidance of 3000-4000 words. Shorter and more succinct pieces of work tended to be more tightly structured. They were also more manageable from a student's perspective. The more concise style led, in many instances, to higher quality writing and a more focused approach. It was also found that students who substantially exceeded the word guidance sometimes disadvantaged themselves in other ways. For example, some wrote at great length on aspects of the background of the study area that had no bearing on the issue being investigated or alternatively wrote an extended and poorly focused literature review. Others developed a series of sub-hypotheses or sub-questions that were not closely connected, so their investigations tended to become fragmented and lacking in continuity.

Centres applied the requirements for Non Examination Assessment throughout the research and the write-up phase, and there were very few instances of misinterpretation of the regulatory guidelines. Most centres were aware that students must define their own research area and title. Centres can suggest or specify relevant themes but must not provide titles, hypotheses or questions. Teachers must not mark work provisionally or share any comments so that students can then improve their work. Once submitted, work cannot be returned. Furthermore centres are not allowed to provide primary or secondary data not collected by the student either individually or as part of a group. All secondary sources should be researched and compiled individually, even if students have worked collaboratively in collecting primary data.

The vast majority of centres completed all aspects of administration efficiently and on time. In general, work was very well presented for the moderation process with the relevant administrative forms enclosed. The Centre Declaration Sheet should accompany the scripts submitted for moderation, signed by all teachers involved in the assessment of the work. The Student Record Forms must also be signed by both the student and the teacher to confirm the authenticity of the work, and the teacher must approve the initial student proposal, predating the collection of data and not completed retrospectively. When sending sample work to the moderator, it should be removed from binders/bulky folders. Please secure work using a treasury tag or by placing inside a manila folder. All scripts should be suitably labelled prior to dispatch. For a small number of centres there was an issue with bulky reports containing batches of questionnaires and other recording sheets.

Some issues of concern applied to a minority of centres:

1. Certain titles not linked to the specification were inappropriately chosen, probably a legacy of past fieldwork undertaken for the previous specification. A number of students elected to carry out investigations based on fluvial geomorphology processes and landforms. Some completed source to mouth studies of rivers using all 8 variables proposed in the Bradshaw model, a theme that is not part of specification content. Similarly some purely meteorological studies were incorrectly approved by centres. It is also difficult to justify a tourism study based on the Butler model unless the student makes a convincing link for instance to changing places. In reality there are relatively few geographical topics that cannot be justified in in terms of links the specification, but students must demonstrate this connection as part of the enquiry process.

2. A few centres submitted investigations that appeared to use data collected by the entire cohort. The results for all students were combined, and then used by all to complete their investigations, with identical recording sheets for the whole group. In some instances it appeared that the students had decided their titles and hypotheses retrospectively. This is not acceptable practice as it severely limits opportunities for independent work and is not in compliance with the NEA regulatory guidelines. In some instances where there was group data collection the students did not select the methods appropriate to their hypotheses; rather they wrote up all their data collection methods.

3. In a few instances the range of titles was very limited, with centres allowing all students to follow almost identical themes and questions. It is inevitable that some overlapping themes will occur depending on the type of location visited for fieldwork. However centres are strongly advised to raise awareness of a range of topics and themes that can be potentially researched and developed even if it is within the constraints of one or two different environments. It is not acceptable for example for an entire cohort to be investigating endogenous factors influencing a place, or for all students to be investigating the changing number of plants/biodiversity across a sand dune. There is a danger of the work becoming unduly formulaic, with similar presentation and analytical techniques, outcomes and evaluations.

4. Many centres use external providers to deliver part or all of the requirements for Non Examination Assessment. Good practice is to attend a skills based course showcasing a variety of fieldwork data collection methods in contrasting environments. Students can then use these skills transferably to collect independent investigation data back in their local place, after the field course has ended. If the centre uses an external provider to help students to develop their own investigations it is vital to ensure that the design of each investigation is independent and that students have the ability to choose the theme of their studies. In a few cases the titles, questions/hypotheses and subsequent work were very similar for all students and certain aspects of the NEA guidelines were not followed. It is important in these circumstances to build in enough time for staff to give approval and guidance for titles that are selected independently by the students, having visited a range of environments first.

Centres are reminded that if any form of malpractice is suspected, AQA will investigate. Where malpractice is found to have taken place a penalty is given dependent on the circumstances and severity of the malpractice.

The written report

The advised structure to the written report is that it should be linked closely to the mark scheme. It is recommended that it follows a logical sequence, starting with the CRF, and covers the four areas of the mark scheme. Some students submitted work that only partially covered the four areas, and a small minority did not attach a completed proposal or only partly filled it in.

The CRF

Teacher advice on the CRF should comprise general guidance only. It is fine to ask general questions, indicate if the study is over-ambitious or unclear, check health and safety, ensure the study is at the right scale, is linked to the spec content, is feasible and realistic, can be completed in the available time, and will give sufficient data. In a few cases the advice was too specific. Teachers should avoid suggesting alternative titles, or recommending which questions or hypotheses to drop. Sometimes the teacher section was left bland and opportunities for reducing breadth and subsequent very long studies were missed.

Area 1 Introduction and Preliminary Research

a) Define the Research Questions

Almost all students identified a specific research question or hypothesis which was linked explicitly to the specification. Not all had the most appropriate link; for instance studies of sand dune succession were often linked to coastal landscapes, whereas the key focus was on ecosystems and plant succession. Some studies of environmental inequality were linked to changing place but not, more appropriately perhaps, to contemporary urban environments. The best were often focused on two or three linked aspects with specific justification as to how their topic fitted. In the mark scheme “complete referencing” means that the study includes the relevant wording of the specification content, and a suitable comment as to how it is relevant. “Secure referencing” might mean that the relevant wording of the spec is used but there is more limited additional comment or rationale, or that the meaning is stated less directly.

Investigations can be structured around a single question or hypothesis. Alternatively students may wish to base the study on 2 or 3 connected sub-questions/hypotheses. Students should beware the multi-hypothesis approach, which can lead to lengthy reports with repetition of analysis and interpretation or deviation into separate studies. When adopting a hypothesis framework students should ensure that the hypotheses are capable of being tested, and either being supported or refuted, on the basis of field evidence. A number of titles were too broad or ambitious, making the task of fully answering the question very difficult within the 4000 word guidance.

b) Research relevant literature sources and understand and write up the theoretical or comparative context for a research question

The quality of literature review varied, as did its relevance. The best had a reasonable number of sources that had been carefully selected, were pertinent to the study, considered different perspectives and were fully referenced. Some had too many sources and just reported what had been found without linking the information to the investigation. A number simply consisted of a few web pages giving background to the selected location with very limited geographical theory.

A theoretical context is essential for all enquiries; this may be a model, concept, idea or geographical theory. Sometimes this was absent, or was only covered superficially. The locational

and comparative context had similar issues; some looked at a historical context, which was generally unnecessary or had superfluous detail about a settlement, rather than the specific area of study. Some centres seemed to think two different places had to be studied to give a comparative context, which was not the case. Most students included a bibliography at the end of the study though many of the references were not used or referred to in the body of the text. There is little or no credit for a list of sources which are not utilised as part of the investigation.

Many students included a risk assessment in their introductions. This is an essential part of the planning process but is not a requirement of the mark scheme unless perhaps it is successfully linked with aspects of the ethical dimension.

Area 2 Methods of Field Investigation

a) Observe and record the phenomena in the field and devise and justify practical approaches including sampling.

There was usually a range of data collected, with a focus on primary sources. It was good to see a diverse mix of methodologies being employed, and students were generally conversant with the suitability of both qualitative and quantitative methods. Some investigations, such as those examining inequalities in urban areas, relied heavily on secondary data, almost to the exclusion of primary data, which seemed to be added almost as an afterthought.

Most could justify why the data item was included; fewer could explain why the data was collected in a particular way. This applied to sampling, where many did not justify the sample size or method adopted. Indeed, some did not fully understand the sampling strategies available, seeing opportunistic or pragmatic as random, for example. Some confusion occurred when identifying and discussing secondary data, which is information derived from published documentary sources and has been processed, such as census data, research papers, text books, and information from websites.

Amongst the better scripts there was evidence of a well-designed planning phase with a selected range of techniques linked to the aims and focus, explanation and understanding of sampling with justification of number of sites and surveys, and choice of suitable methods that made a significant contribution and were integrated into the task and followed up in all sections. The stronger students carefully selected a range of appropriate methods, discussed and justified sampling techniques fully and provided details of timings, sample size and frequencies.

Less convincing work occurred when too many (or too few) techniques were used with no real understanding of how or why each method might be relevant. There was too much of the ‘scattergun’ approach (more is not always better), little or no sampling and appreciation of methods, e.g. why the number of questionnaires was chosen, and methodology tables that were too simplistic and didn’t allow any ‘stretch’ through the poorly chosen headings. In some of the poorer quality scripts, methods were selected indiscriminately and inappropriately, with only limited reference to the title or question.

Where the study is split into sub-questions or sub -hypotheses it is good practice to link the method(s) to each in turn. If students wish to use a tabular format to explain methodology, they should devise their own tables with suitable sub-headings rather than being provided with a standard version produced by the centre.

b) Demonstrate practical knowledge and understanding of field methodologies appropriate to the investigation of human and physical approaches.

The explanations of field methodology were variable in detail but in general students understood the requirements. A minority of centres over-marked this strand. Advice given to students should indicate the need for step by step methodology so that data collection could be replicated. The reader should know where to go, when, what to do and how to do it. Some students wrote the method in the future tense indicating a planning phase but this didn't always fully reflect what was done in the field. In a few instances credit was incorrectly given for laboratory experiments into infiltration and other variables classified as a primary data technique. Geographical fieldwork requires the collection of primary data in a real geographical environment ie beyond the classroom or laboratory.

There was sometimes a problem with group data collection. Some students explained the methods involved and used all the data that the centre had collected irrespective as to whether it was relevant to their title. Given the word guidance and the need for a focused approach to enquiry it is essential to incorporate only those techniques that address the questions or aims of the investigation.

c) Implement chosen methodologies to collect data /information.

The requirement for this strand is to show that the methods of data collection have yielded information that is of good quality in supporting the aims of the investigation. This becomes evident in subsequent tables of data, and other presentation techniques. Needless to say there is no credit for methods of data collection that are described and explained but are not then executed in the field, no matter in how much detail they have been outlined. Most had adequate data, at least. Some had limited numbers of questionnaires and visited few study sites and seemed unaware of this; a significant number had far too much data which made the task more difficult due to duplicity and length.

The importance of collecting appropriate, plentiful and meaningful data needs to be stressed. Where only minimal data was collected, with small and/or unrepresentative sample, all three methodology strands were likely to score low marks. This then has a knock on effect in that data presentation and critical analysis, and even the conclusion tend to be weak as well. From various fieldwork logs it is evident that a minority of students spent only a limited time in the field, perhaps just a few hours, collecting primary data. Others had a comprehensive and balanced data collection programme designed to elicit sufficient information and evidence to explore the themes and aims of the enquiry. In this respect the number of methods for data capture is far less important than the compilation of a body of useful and relevant information targeted at the enquiry. Some methods are quick to complete and produce relatively little data, whereas others may take all day and yield a significant amount of useful information.

Students do not need to include all of their raw data collection booklets and recording sheets with their investigation. It is sufficient for there to be a 'sample' of their raw data collection tables as evidence of primary data collection conducted. However a well annotated sample questionnaire or recording sheet which shows the rationale for that method can be useful when discussing methodology.

Area 3 Methods of Critical analysis

a) Knowledge and understanding of the techniques appropriate for analysing field data

Many students opted for “safe” means of presenting data so there were numerous graphical techniques. Although these were generally appropriate, they often lacked the spatial element that would have been afforded by mapping the data as located symbols or graphs. This should be encouraged, given the spatial dimension of the subject. On occasion the use of very basic graphs such as pie charts showing yes/no proportions was superfluous. Elsewhere the indiscriminate over-use of computer generated graphs using excel “chart wizard” was inappropriate.

Best practice occurred when there was a limited, but well selected and suitable number of graphs and other techniques to showcase results, with imaginative and intelligent use of computer software, making good use of geographical terminology. Some applied more sophisticated GIS and visualisation techniques that allowed students to plot their results on digital overlays using software such as Google Maps, Google Earth, ArcGIS Online or Aegis. Other complex techniques used effectively included various types of map such as choropleth, flow and isoline maps, graphs such as scatter plots with trend lines, and located proportional graphs on base maps.

The majority used statistics in a relevant, pertinent way and often understood the outcome, although others missed various opportunities to analyse their results statistically. For a minority quantitative analysis of data was not always used appropriately. Students should be encouraged to indicate the hypothesis at the start of a statistical test so that the context is clear. There were misconceptions on the part of a sizeable minority that Chi squared tests for correlation and not differences between data sets, whilst others attempted to use a Mann Whitney U test to establish a relationship between two sets of data. On occasion there were insufficient pairs of data for a Spearman’s Rank Correlation and a number of students who did use a statistical test avoided significance testing as a final step. Students should be aware of how to interpret the results of the tests, taking into account the degrees of freedom for the data and confidence levels, as appropriate. Quoting the final outcome of a statistical test is important, but they need to understand what it means in the context of the investigation.

Note that it is not essential to use statistics when analysing fieldwork results, depending on the nature of data collected. Qualitative techniques are equally acceptable where appropriate and many students legitimately confined their presentation and analysis to these, for example the use of well annotated photographs, mapping with superimposed symbols and annotations, or colour coding and graphical representation of interview transcripts. As with methodology, the crucial aspect is the appropriateness of the techniques used as opposed to a rigid number of qualitative and quantitative skills. A small proportion of centres marked this strand as if for the legacy GCSE controlled assessment and assumed that there were set number of techniques for each level. Whatever presentation and analytical techniques are used, they should all have the correct mapping and graphical conventions present at this level. Too often the presentation techniques seen lacked clear titles, labelled axis, and appropriate scales.

The mark scheme indicates that presentation, analysis and interpretation should be integrated and not considered separately from each other, so ideally the presentation of data should be found alongside the commentary and explanation of results and certainly not added as a supplement at the end of the report.

b) Demonstrate the ability to interrogate and critically examine field data to comment on accuracy, extent to which it is representative and use the experience to extend geographical understanding.

It is pleasing to report that the majority of students wrote logical and organised descriptions, and often precise explanations of their results. Patterns and trends were identified, showing an

understanding of the 'bigger picture' and making links and connections between data sets. Most of the work showed several instances of data manipulation and students worked systematically through each set of data giving reasons for the patterns they observed. Most realised the need to examine and give explanations for anomalous results although strangely some felt that this was a major weakness of the investigation.

Inevitably outcomes for this strand varied a great deal, from students who simply described the data in a basic manner to those who critically examined and interrogated the information collected and provided thorough explanations which linked to a wider context. Some were hampered in their interpretations by the limited nature of the data collected or the poor use of presentation and analytical techniques.

Note that this strand also requires the student to comment on the degree to which the data collected constitutes a representative sample. In some studies this evaluative element was not included in the written report.

c) Apply existing knowledge, theory and concepts to order and understand field observations

The majority of students showed an awareness of the implications of the findings and returned to the theoretical aspects that drove the study. There were excellent examples where students engaged with theory and geographical concepts in their explanation of the data and the results. Some referred again to their literature review and took the opportunity to refer to the wider context throughout the investigation, including the final conclusion.

In others the underpinning theory was not integrated into the analysis, nor was it used to help explain the results. The data was seen in isolation, so very little credit could be awarded for this strand.

Area 4 Conclusions, Evaluation and presentation

a) To show ability to write up field results clearly and logically using a range of presentation methods

Most students knew how to write up the work as an enquiry sequence and there were some logical 'book like' studies with titles, contents, pagination evident, well written paragraphs, techniques integrated into the study, evaluation and conclusions at the end with a bibliography and an appendix. Generally, the work was well presented.

On the other hand, there were a number of students who did not integrate techniques into the main body of the work, or who failed to present the work logically, for instance by writing the methods at the end, or by missing an overall conclusion to the investigation.
When assessing this strand the full range of presentation techniques should be considered, which encompasses all forms including location maps and photographs, as well as those depicting the data collected.

A few students made too much use of an appendix. The written text must function independently of its appendix. The central topic must be addressed within the main body of the text and all supporting arguments must not depend on material located in the appendix. For example data should be presented, summarised and discussed in the main text, but the raw data or sample recording sheet could be placed in the appendix.

b) Evaluate and reflect on fieldwork investigations, explain how he results relate to the wide context and show an understanding of the ethical dimensions of fieldwork research.

Most were able to evaluate methodology, sometimes in a basic way and almost as a wish list for what could have been thought through more carefully. Many students examined limitations and solutions in their methodology tables, which was fine in capturing the main points but less effective where a more developed response was required to meet the requirements of the evaluation strand.

A significant proportion were limited to logistical issues including a list of excuses as to why the results 'didn't work'; bad weather was of major concern, poor equipment let them down and there was much generic consideration of methodological issues. Some suggested realistic ways to improve and extend their studies. Others showed a greater awareness of difficulties, often linked to sampling and could then go beyond the methods to consider the reliability of the results collected.

The more astute students were able to reflect on their findings in relation to the original task set and realised the tenuous nature of their conclusions in relation to the broader geographical context. There was some confusion between ethical considerations and a risk assessment. The ethical dimension deals with issues in collecting the data and addressing these linked to minimising impact on people and environment and being unobtrusive. It may involve being aware of cultural differences and of the possibilities of causing offence through manner or dress, building 'consent' and 'confidentiality' into questionnaires and interviews, and generally avoiding causing problems for the public such as blocking pavements or interrupting trade. In physical geography, the main ethical considerations are around consent and access to study sites and potential damage. This could include concerns over trampling, damage to plants and animals or possible pollution (including litter or contamination) of study sites.

Some perceived the ethical dimension as a risk to their own safety and assumed that a risk assessment would cover this element of the investigation. The inclusion of the ethical dimension needs to be stressed as it can impact on the level awarded for the evaluation section. It can appear as part of the evaluation but may appropriately be an extension of methodology.

c) Demonstrate the ability to write a coherent analysis of fieldwork findings to answer a specific geographical question.

The conclusion is a concise synthesis of findings that relates back to original hypothesis or research question and/or sub-questions. Conclusions varied from those who restated their interpretation of results, to those who saw the significance of their findings, supported by evidence and being aware of a wider application. The more successful students summarised the outcome of their research based on the evidence collected, drew on geographical theory or concepts in explaining the findings of the enquiry and developed clear lines of reasoning demonstrating a comprehensive enquiry process.

Some conclusions were vague and lengthy, simply repeating some of the earlier analysis. Many students wrote the conclusion on a hypothesis by hypothesis basis which ensured that these mini-conclusions related back to the original aims and hypothesis. A significant proportion however failed to provide an overall summative conclusion. A few produced quite plausible sounding conclusions but unfortunately did not draw on the evidence collected.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the Results Statistics page of the AQA Website.