Examiners' Report
Principal Examiner Feedback

Summer 2019

Pearson Edexcel A Level GCE
In Geography (9GE0)
Paper 4 :Coursework-Independent Investigation

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It was pleasing to see that in the second year of the **9GE04** unit candidates produced work that was devised and completed independently, were a joy to read and were very much in the spirit and ethos of the Independent Investigation.

As with last year there was an even split between physical and human titles and there was a pleasing number of students who attempted projects based on glaciation. This was encouraging as there were less than 15% of the cohort attempting the Glaciation questions in the Unit 1 examination.

There also appeared to be fewer centres who had found it difficult to apply the mark scheme correctly and so it appears that the extensive training offered by Pearson has allowed most centres to interpret and apply the marking criteria accurately and consistently. There was also a full range of marks being awarded with the lowest being 4 and over 200 candidates being awarded the top mark of 70.

Titles

There were a wide variety of both physical and human coursework titles submitted this year. An evaluation of management approaches at the coast as well as the impact of physical processes on sediment characteristics were the most popular physical titles whilst the success of regeneration in urban areas was by far away the most popular urban title.

In general, the titles were more manageable this year with centres and candidates taking notice of the 2018 E9's, the CAS service offered by Pearson, the online and face to face training sessions and the exemplar materials provided the Pearson web site.

As a result, it was pleasing to see titles focused on smaller areas of regeneration projects as well as one aspect of the regeneration process such as environmental sustainability as opposed to trying to evaluate all aspects of projects for a wide area such as **'The Olympic Park'**.

It was also pleasing to see that centres had taken on board the advice offered in the last moderators report and there was less evidence of candidates from one centre all offering similar titles.

There was some continued evidence, however, of centres to continue to **'retrofit'** the Independent Investigation proposal form. Fieldwork is often a voyage of discovery and so it should not be seen as an issue that investigations change from the initial proposal. Instead this should be recorded as part of the process of completing the investigation.

Purpose of the investigation

The best candidates demonstrated accurate and relevant geographical knowledge and understanding of location, geographical theory and comparative context throughout the project rather than just in the first section usually titled **'Introduction'**. It was pleasing to see that candidates have continued to use models and theories that became an integral part of their entire project. It was also pleasing that many centres had noted the use of the Egan wheel as a tool for assessing the success of regeneration and had cascaded this advice down to their students.

In addition, the best candidates then linked their projects to a broader geographical context by investigating a wide range of relevant geographical sources in order to identify and obtain accurate geographical information and data that supported the investigation. There was much evidence of both thorough and purposeful research with sources ranging from text books/Student A level magazines to published academic work that had been obtained through Google Scholar. It is important to stress that this is a key part of the investigation as it is a fundamental part of the marks available for the Conclusion and Critical Evaluation section.

However, there was a tendency in some centres to include a separate section entitled 'Literature Review'. In some cases, these became overlong explanations of theory which did not gain the candidate any extra marks. Although the candidate is encouraged to read around the subject, a separate literature review is not required. Instead the candidate is best served by writing concisely quoting a range of relevant sources as has been demonstrated in the exemplars that Pearson have published on the web site.

A useful checklist for students might be to make sure that they self-assess their work using the following list;

- ✓ *Accurate and relevant geographical knowledge*
- ✓ *A model and / or theory that can be tested*
- ✓ *Applies understanding to find coherent and relevant links*
- ✓ *Investigates a wide range of relevant geographical sources throughout the project*
- ✓ *Research information is used to construct a justified aim*
- ✓ *Manageable scale*
- ✓ *Appropriate framework*

Field Methodologies and Data Collection

As with last year there was a great range in the nature of the fieldwork data that was collected from 'traditional' data such as the variation in sediment characteristics along a beach to more **'contemporary'** techniques such as **'place identity'** and **'perception'** surveys.

The evidence of the 2019 cohort suggests that the key for a good project was that the candidate chose appropriate methods to collect a range of data and information relevant to the geographical topic that was accurate, precise and reliable. It is in this context that the suitability of some of the data collection techniques should be considered. A well-crafted and targeted questionnaire can give useful information for both human and physical topics but many were generic and had questions that had only tangential relevance to the title of the project which were unlikely to produce data with a high level of both accuracy, precision and reliability.

It was pleasing to see that the comments on sampling made in last year's report had been taken on board. Many of the candidates in the 2019 cohort had designed a valid sampling framework that was explicitly linked and appropriate to the geographical focus being investigated. There was also less evidence that centres had determined the sampling framework through teacher led selection thereby not allowing the candidate to demonstrate that they had designed the sampling framework themselves.

A key characteristic of the work submitted by the best candidates was a consideration of both the frequency and timing of their observations. In contrast there was a minority of projects that relied on just one day's data collection. These struggled to justify how such an approach would give reliable data and so were self-penalising.

As was commented on in last year's report there were still issues over what constituted ethical dimensions of field research methods. Students should consider:

- Research on living subjects
- Data storage
- Environmental impacts

Informed consent: it is important that people you research understand the research you are undertaking, its aims, methods and likely outcomes. You need to ensure that consent is ongoing - participants continue to give their consent, i.e. can withdraw at any time. Participants are usually given an **information sheet**, written in appropriate language and style, to read before they decide to take part in the research. A **consent form** is also usual practice.

Anonymity and confidentiality: You need to make it very clear to participants whether the data they give you will be made anonymous (i.e. names and other identifiers removed) and kept confidential (i.e. not shared with other participants).

Management and storing of data. This may mean how you take steps to anonymise, file, label and store data securely. Note that you should

describe how you will store data when in the field, where you will then transfer it to and how soon, deletion of files on mobile devices (including laptops), how you'll create a systematic way of versioning files, and a system for backing up data (where and when).

Many human geographers adhere to the ethical codes of the British Sociological Association or the Association of Social Anthropologists.

In terms of physical geography, ethical dimensions could consider whether it is appropriate to take samples from ecosystems for subsequent laboratory analysis or strategies to minimise environmental impacts in the field. Some candidates were able to show this through a well written risk assessment to meet this criterion.

Finally, it was pleasing that there was very little evidence of projects based on purely classroom based desk-studies that process existing data.

A useful checklist for students might be to make sure that they self-assess their work using the following list;

- ✓ *Chooses appropriate methods*
- ✓ *Range of data*
- ✓ *Designs a valid sampling framework*
- ✓ *Temporal sampling*
- ✓ *Spatial sampling*
- ✓ *Ethical dimensions*
- ✓ *Reliability*
- ✓ *Accuracy*
- ✓ *Precision*

Data representation, analysis and interpretation

Candidates are continuing to use a pleasing range of both cartographical and graphical presentational techniques as noted in last year's report. The evidence of the 2019 cohort suggests that key to obtaining high marks was that the technique was **'appropriate'** and so located bar charts could be as appropriate as the most sophisticated GIS technique.

It was also pleasing to see a range of accurate statistical techniques being used to test the geographical significance of the data collected by the candidates. As noted in last years' report it is still vital for the students to ensure that the statistical test is appropriate and valid. Some candidates used statistical tests that were often inappropriate or incorrectly used such as the use of % in a Chi Square test or Student's t test for samples that were drawn from two different populations.

As suggested in last year's report centres are encouraged to recommend the RGS **'A Student Guide to the A Level Independent Investigation (Non-examined Assessment—NEA**)' to their students with help on choosing the appropriate statistical technique.

A useful checklist for students might be to make sure that they self-assess their work using the following list;

- ✓ Statistical skills
- ✓ Geographical skills
- ✓ Evidenced connections
- ✓ Statistical significance
- ✓ Appraisal of techniques and methodologies
- ✓ Clear and technically accurate presentation
- ✓ Rational evidenced based conclusions

Conclusions and Critical Evaluation

The Principal Moderator is pleased that many centres have risen to the challenge of persuading their students to complete better conclusions and critical evaluations. In contrast to last year there was less evidence that the section was 'rushed' and the best candidates displayed balanced and concise, well-developed arguments which were fully supported by the drawing together of a selection of relevant evidence. It was also pleasing to see that many more used their secondary research to do this in conjunction with their primary data.

There is, however, some evidence that candidates are not fully taking the advantage of evaluating their findings against other study situations and so developing their ability to meet the criteria of accurate and relevant geographical knowledge and understanding of location, geographical theory and comparative context. By doing this they would then be able to find coherent and relevant links between the investigation's conclusions and a broader geographical context to be made.

A useful checklist for students might be to make sure that they self-assess their work using the following list;

- ✓ *Synthesises research findings to produce convincing conclusions which are fully supported*
- ✓ *A balanced appraisal of the reliability of the evidence and the validity of the conclusions*
- ✓ *Accurate and relevant geographical knowledge of*
- ✓ *Location*
- ✓ *Geographical theory*
- ✓ *Comparative context*

- ✓ *Coherent and relevant links between the conclusions and a broader geographical context*

Summary

From the evidence of the 2019 cohort the Principal Moderator would advise centres that the best projects were:

- On a Manageable scale
- Utilised an appropriate framework
- Choose appropriate methods collecting a range of data
- Utilised a valid sampling framework that considered both temporal and spatial sampling
- Considered Ethical dimensions
- Ensured that there were clear and technically accurate presentation and statistical analysis of the data
- Rational evidenced based conclusions