

Environmental systems and societies

Contents

Extended essay

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For grade boundary information, please refer to the Grade boundaries for Diploma programme coordinators document available on the PRC.

Extended essay

The range and suitability of the work submitted

The multidisciplinary nature of the subject makes environmental systems and societies an ideal subject for exploring an environmental topic or issue of particular interest for the candidates or relevance for their communities. Although the majority of the essays submitted covered relevant topics for Environmental Systems and Societies, some candidates selected research questions that could be better assessed under other IB subjects, such as biology. The overall quality of the essays ranged from weak to outstanding. The best essays had few things in common, such as a genuine curiosity about the selected topic, simplicity, and experimental work. Due to the unusual circumstances caused by the pandemic, a larger number of candidates decided to focus their research question on secondary data or on opinion surveys. In general, it was more difficult for those candidates to produce high quality essays. Some essays investigated relationships that were too vague or indirect, often claiming causation where nothing more than correlation could be established. However, a number of essays were highly inventive showing a good understanding of the concepts, often dealing with issues of local importance that have obviously excited the candidates' imagination.

Many essays look like a longer internal assessment following the expected requirements of the internal assessment component instead of the extended essay. Usually, those essays ignored or failed to consider **the relevance of the society's role** in the subject. Supervisors should explain to candidates the requirements for an extended essay and caution them against simply writing yet following a laboratory report format. Students and supervisors should review the requirements of the guidelines for extended essays and the holistic approach before selecting the research question. The guide sets out the responsibilities of the student, the school, and the supervisor. It is not fair to place all the responsibility on the student. Assigning an untrained supervisor to a student is likely to result in a much lower grade for the student.

Candidate performance against each criterion

Criterion A: focus and method

Candidates, generally, selected topics and research questions that were suitable for an extended essay on Environmental Systems and Societies and performed well but posing a specific research question is still challenging. Same applies for evidence regarding the selection of sources. Only the good essays focused upon the interaction of the natural environmental and human societies. Some essays would have been better submitted under one of the more specialized subject areas, such as biology. Generally, the research question was clearly defined, although it was not always properly discussed throughout the essay. Some candidates from the same school selected very similar research questions and followed related procedures.

Some of the most common concerns in this criterion were usually due to an inappropriate choice of sources or limited bibliographic references. Very few essays, based on secondary data, demonstrated a sufficiently wide and reliable selection of sources. Some candidates only cited online articles and included no further citations of scientific papers which limited their perspective on the problem they were investigating. It was a common matter to use web pages, non-academic, commercial, or obviously biased as valid sources – students should be trained to select sources that are reliable. In only a few cases did

students select peer-reviewed, academic publications. Good essays presented evidence of effective and informed selection of sources and/or methods.

Criterion B: knowledge and understanding

The majority of candidates demonstrated good knowledge and understanding of their research topic but in some cases there was serious conceptual confusion. There are also candidates who misunderstood some concepts like sustainability, global warming, etc. It is common to corroborate good knowledge in the initial theoretical and review explanation of the main topic, but the treatment of the issue indicated at times a poor understanding. Most extended essays are written with appropriate terminology and communicate ideas clearly. It is common to use appropriate and clear language. When it isn't, is due more to lack of plan and clear ideas than to language problems. There are few candidates who employed colloquial expressions and informal language. As already mentioned, some essays did not address the **society's role**. **Those essays normally demonstrated knowledge** and use the terminology of one of the experimental or human sciences.

Criterion C: critical thinking

This is surely the criterion that presents more weaknesses in general, usually lacking a better collection of data and its subsequent analysis and discussion. The exceptional high number of essays in Environmental Systems and Societies, this year that carried out the research based on literature sources instead of data collected by the students themselves aggravated the challenge presented by this criterion. The shortage of substantial data often prevented a clear analysis focused on the research question.

A substantial number of students based the methodology on online surveys, but usually the surveys tended to be very low-quality and failed to provide relevant data. The discussion and evaluation of the research undertaken tended to be superficial and irrelevant. In many cases the ideas were presented without clearly indicating their relationship with the research question - and the arguments usually have obvious gaps, not taking into account the information provided. Arguments by most candidates were sometimes in detail, however, many are speculative and are not supported by evidence. Conclusions to individual points of analysis are supported by the evidence but there were some minor inconsistencies. Some suggestions for further investigations were too basic or too simplistic. Only the higher quality extended essays usually had sufficient data to develop a proper reasoning. This criterion (Critical thinking) tended to be one of the most challenging criteria for the candidates.

Criterion D: presentation

Most of the extended essays were well presented and conformed to academic standards regarding the formal presentation and expected layout. Candidates submitted varieties of format but most of them addressed the element prescribed for the formal presentation of the extended essay. Many candidates used footnotes and endnotes which allowed easy referencing.

The loss of points on this criterion is related mainly with oversights and inaccuracies in the presentation of the bibliographic references, quotations from sources or errors on graphic material. Noteworthy is the poor characterization of locations: normally use google maps with incomplete data on topography, climate, lack of scale in maps, etc. Other aspects of the presentation are usually well-maintained but the appendix was also a problematic area for some candidates. Some also overused the appendix, including extremely lengthy and unconnected material that is not relevant for the essay. Nevertheless, this was the criterion with better performance by the majority of the candidates.

Criterion E: engagement

The requirement of a reflection process in the extended essay remains a uniqueness for many candidates and supervisors. Some of the students showed engagement with their research focus and the research process. Further, strong candidates provided a clear insight into their process of selection of research question; decisions made during the process and suggested valid improvements. Those candidates provided analytical and evaluative reflections on decision-making and planning which included reference to their capacity to consider actions and ideas in response to setbacks experienced in the research process. However, many candidates had a very descriptive approach on the different stages of this process. Few candidates did not fill in the reflections on planning and progress form (RPPF). The guide sets out the responsibilities of the student, the school, and the supervisor.

Recommendations for the supervision of future candidates

The supervisor must ensure that the candidate knows the requirements of the extended essay. The candidates must be made aware of the differences between an IA and an extended essay. Students should play a definitively active role on selection of the research topic and its exploration. It is very difficult to score a high grade on criterion E (Engagement) when the whole process is driven by the supervisor. Often, simple research projects, involving experimental work generate high quality extended essays, there is no need for complex or sophisticated methodology. It is highly recommended that students have seen previous monographs with different qualifications so that they can ponder themselves at what level their own monograph is located.

Supervisors must assist candidates with the fact that assessment criteria are applied holistically to the whole extended essay. Despite being a multidisciplinary subject, candidates should be reminded of the necessity of theoretical content for the subject and express the importance of their research for their community. Although literature-based essays and essays relying on surveys are suitable, on many occasions those essays are partially unsuccessful by not have been able to obtain sufficient relevant data to treat the problem. It is recommended that the student is sure that they are able to obtain data appropriate for the research question before starting to devote too much effort and work. Students need to improve or learn to apply criteria to choose bibliographic sources in a more critical way. Another area to improve is establishing the validity of the data or source.

Elementary errors in formal aspects, such as: inaccuracies on the bibliographic references, quotes from sources without following any admitted criteria; mistakes in the presentation of tables and graphic material, etc. are easy to avoid or correct. It is paramount that the students know, before starting the process, citation rules and requirements to prepare a research question. Many students need guidance on preparing appropriate surveys, to ensure they collect relevant data. In some cases, students reached obvious conclusions but without discussing the facts upon which the conclusions were based. The three tutoring sessions are often described as simply methodological and the structure of the research is discussed, but not the personal involvement of the student or their learning. In general, it should highlight a more holistic appearance of the subject, which deals with the interaction between environment and human societies.

Further comments

The comments of the supervisor are an important orientation, but many schools ignored it. Failures in the formal criteria are often repeated at the same school, which indicates a lack of information from the supervisor.

Extended essay supervisor for environmental systems and societies, whenever possible, should encourage students to undertake some practical or field work.