

Criterion J: abstract

The abstract is judged on the clarity with which it presents an overview of the research and the essay, not on the quality of the research question itself, nor on the quality of the argument or the conclusions. Students are required to set out clearly their research question or hypothesis, and explain how they approached their investigation and the conclusions that they reached.

Criterion K: holistic judgment

Qualities that are rewarded under this criterion include the following.

- Intellectual initiative: Ways of demonstrating this in politics essays include the choice of topic and research question, locating and using sources that have been little used previously, and new approaches to traditional topics (based on a re-evaluation of accepted theories).
- Insight and depth of understanding: These are most likely to be demonstrated as a consequence of focused research, of thorough and well-informed reflection, and of reasoned argument that consistently and effectively addresses the research question.

Psychology

These subject guidelines should be read in conjunction with the “Introduction”, “Outline” and “Details—all essays” sections of this guide.

Overview

An extended essay in psychology provides students with an opportunity to investigate an area within the field of psychology that is based upon personal interest, and which may well go beyond the Diploma Programme psychology course. Students are able to pursue actively a research question that will develop their analytical and communication skills, and their understanding of behaviour. At the same time, the extended essay aims to introduce students to the excitement of academic discovery.

The current *Psychology guide* defines the nature of the subject as “the systematic study of behaviour and experience”. Students should have a well-developed understanding of what falls within the scope of psychology when they are developing their topic. Psychology involves studying the behaviour of human as well as non-human animals. It has its own specialist terms, methods and literature. It is essential for students undertaking an extended essay in psychology to have a reasonable understanding of the subject and its methodologies.

Psychology is not a “residual” category for essays that do not fit into any other extended essay subject. Students must choose topics that lend themselves to psychological investigation and analysis, and must carefully consider their choice of topic in terms of the assessment criteria.

Choice of topic

An extended essay in psychology allows students to investigate a topic of personal interest in a systematic manner. The essay should be based on a well-focused research question that the student attempts to answer throughout the course of the essay. The essay should be considered more of an investigative, analytical argument than a research hypothesis to be uncovered by use of research methods in a formal psychological study. Data collection and research methods, such as experiments, surveys, observations and case studies, are not appropriate for a psychology extended essay, and should not form part of the student’s project.

Psychology is a broad field that has many subsets and specialties, providing a wide range of possible topics. Past experience strongly suggests that personal interest plays an important role in the success of an essay and it is recommended that students consider their own personal interests, such as sport or child development, as a starting

point in the process. After selecting a field of interest, students can then consider areas of investigation within that field in order to narrow the scope of their essay and research question. For example, a student might be highly interested in commercial aviation. Many large commercial airlines employ psychologists to investigate pilot performance and factors such as stress or emergency management. A research question that may follow from this could be “To what extent has research on stress with airline pilots improved airline safety standards?”. Additional examples are provided later in this section.

The topic selected need not be from the current *Psychology guide*. In fact, some of the most interesting, engaging and successful extended essays are not necessarily based solely on material learned as part of the psychology course. Essays confined to the guide often produce descriptive, dispassionate accounts of classic psychological research. Supervisors do not need to have detailed knowledge of the student's topic: this is a less important factor in topic selection than availability of resources, student interest and the scope of the essay.

Topics that generally fall within the area labelled as “pop psychology” or “self-help” are usually not appropriate for the extended essay. As noted in the definition, psychology is a systematic study. Psychologists conduct research studies and develop theories in their attempt to understand behaviour and experience. Psychology extended essays must be supported with careful and appropriate citation of relevant theories and/or studies within psychology. This implies that the best resources are academic and psychological research journals and texts. Anecdotal support or references from popular publications do not form an appropriate base from which to develop an extended essay in psychology. Additionally, popular topics such as eating disorders, dysfunctional behaviour (such as schizophrenia and depression) and forensic psychology pose a challenge to students unless they have a tightly focused research question. These are very ambitious topics that need far more time and experience than students have at their disposal.

The research question must be focused and provide direction for a psychological argument, issue or topic. Topics that are general in nature inevitably lead to a descriptive and superficial recounting of what can be found in many resources, rather than the development of an argument that attempts to answer a specific question. A more focused question leads to a more tightly developed essay that makes appropriate use of psychological research as the basis for a reasoned argument. While the research question does not need to be phrased as a question, to encourage focus within the essay, it is often helpful to the student if the research question is thought about as an actual question itself. In this way, students can ask themselves “Have I answered this question?”. It is also appropriate for the title to be phrased similarly to the research question, which, again, refocuses the development of the essay.

The choice of topic is best described as a logical process that starts with a field of psychology that is of personal interest to the student. This choice may be further refined to a topic of study within the broader field. From this decision, a research question is developed that may best be constructed in the form of a question, followed by a statement of intent that indicates the approach that is going to be used in answering the question. In this way, the approach to the topic chosen may be even further clarified. Some examples of this could be the following.

Student interests	Football: "Choking" under pressure during an important match
Field of psychology	Sport psychology
Topic	Arousal and athletic performance
Research question	What levels of psychological arousal are most effective for players in team sports?
Approach	Arousal levels and their effects on athletic performance have been subjected to many studies. One of several comparative approaches could be used, for example, qualitative and quantitative

	methods, collectivist and individualist cultures, male and female. These approaches could include reference to gender, methods, ethics or culture. It is suggested that students consider the advantages of confining their research to one specific sport for which they have enthusiasm and, preferably, personal experience in performing.
Student interests	Perception, culture, website design
Field of psychology	Cognitive psychology
Topic	Cultural differences in perception and eye movement patterns
Research question	How can findings from psychological research on perception differences between Asians and Americans be applied to website design?
Approach	Research must be conducted from secondary sources to establish the extent of perceptual differences that are claimed to exist between the two cultures. How are findings from relevant studies applied to strategies that involve visual perception and eye movement patterns, and what industries use this information? Specifically, how do international website designers interpret these findings in designing their websites?
Student interests	Physiotherapy: Recovering from injury
Field of psychology	Learning
Topic	Learning physical skills
Research question	To what extent does immediate feedback, employing digitized moving images of the self, help in the learning process in developing a physical skill?
Approach	The focus is on re-educating the leg muscles of a patient learning to walk again while recovering from a chronic leg injury. By focusing on one of these examples or similar physical actions, the student may consider the advantages of digitized software that allows the patient to have immediate feedback on their movement. On a split screen, this action can be compared to that of a perfect model. The movement can also be compared in a similar way with “stickmen” images on a four-way split screen. The student might consider how this learning method compares to traditional coaching or training, and consider ethical implications. The methodologies used to interpret the efficacy of each learning strategy could be evaluated.

The choice of topic is crucial for achieving a high mark for the extended essay. Choosing the topic needs a period of thoughtful reflection where consideration is given, even at this early stage, to the potential argument, analysis and evaluation that may develop over the course of writing the essay. Topics that do not lend themselves well to analysis, evaluation or debate are unlikely to be the best choices for a student.

Treatment of the topic

Students submitting extended essays in psychology must be fully aware that the discipline has its own unique terms, methods, ethical standards and evaluative commentary. Students should not attempt to prepare an extended essay in psychology if they have not studied the subject formally. The type of knowledge and analytical skills required for a psychology extended essay are best developed through direct learning experiences derived from the Diploma Programme psychology course. Schools where psychology is not taught must be aware that

students who submit extended essays in psychology with no formal exposure to the subject risk earning very low marks.

Specific reference to relevant psychology concepts, theories and studies must be integrated throughout each extended essay; these form the basis for the development of an argument in response to the research question. Essays that take a common sense or anecdotal approach will not earn high marks. Students should incorporate relevant psychological research, and demonstrate critical awareness and understanding of the material. Analysis should go beyond description or recitation of published material and include original analysis by the student.

An important skill that is developed throughout the psychology course is that of evaluative commentary and argument. One of the aims of all group 3 subjects is that students develop an understanding of the contestable nature of the content, as well as a toleration of uncertainty, that often comes from studying the behaviour of individuals and societies. Extended essays submitted in psychology should also demonstrate such understanding. Research and claims should be carefully evaluated to develop a well-rounded understanding of the topic being investigated. When students make assertions in their extended essays, these should always be supported by evidence that is drawn from psychological theories or studies. The current *Psychology guide* includes a framework for evaluation that trains students to address cultural, ethical, gender or methodological considerations that may affect the interpretation of behaviour resulting from a particular study or theory. Comparative analysis might also be an evaluative strategy relevant for inclusion in an extended essay. Students should keep these considerations in mind when selecting a topic, defining a research question and developing an argument.

The IB has published a set of ethical guidelines for the internal assessment component of the psychology course. While the requirements of a psychology extended essay are very different from those of the internal assessment, the ethical guidelines also apply to this project. Students and supervisors share the responsibility of ensuring that the extended essay does not breach established ethical guidelines. Many topics within psychology are sensitive and personal in nature, and careful consideration should be given to all possible ethical issues before students embark on the process of developing their essay.

Frequent reference to the assessment criteria by both the supervisor and the student will help keep a sharper focus on the essay.

Interpreting the assessment criteria

Criterion A: research question

The research question may be written in the form of a question, proposition or statement. It should be focused on a topic that is clearly relevant to psychology, deals with behaviour and is able to be addressed consistently throughout the extended essay.

Criterion B: introduction

This section should place the research question in the context of existing knowledge and understanding of the topic. The student's personal experience or views should not appear in this section. Previous psychological studies that can be related to the research question should be considered. The studies that are introduced here may be generally supportive but they are unlikely to answer the research question in an entirely satisfactory manner. It is part of the student's task to identify strengths, weaknesses and omissions of past work, and to show how his or her essay could help to resolve some of the problems that have been identified.

Criterion C: investigation

There is a wide range of resources available for questions that are likely to be raised in extended essays related to psychology. These include textbooks, academic journals, films, television, radio, newspapers and internet-based

sources. Film, television, radio, newspapers and internet-based sources should be treated with considerable caution since the material they contain may be neither accurate nor valid. The essay should present findings and theories from these sources in an evaluative context and students should not necessarily accept their findings at face value. A healthy and informed scepticism should be maintained towards material from film, television, radio, newspapers and internet-based sources, until authoritative judgment allows their findings or theories to become accepted. Although the argument presented in the essay may be supported by the student's own observations, the presentation or analysis of such material should be used for illustrative purposes only and should form no more than a very minor part of the evidence used.

Criterion D: knowledge and understanding of the topic studied

Evidence and findings from empirical studies and their related theories should be an integral part of extended essays for psychology. Such material may refer to human or non-human animals and their associated behaviours. Where appropriate, students should draw on cultural, ethical, gender and methodological considerations; they should show how these aspects may affect the interpretation of the research question that is the focus of the essay.

Criterion E: reasoned argument

The research question should be the central focus of the argument as it is developed throughout the essay. As the argument is constructed, it often creates conflict between varying theories and findings from studies. The student should explain and analyse these different views and marshal those essential points that support the argument that is being advanced. It is the task of the student to persuade the reader of the reasons for, and validity of, his or her view. This is best accomplished by using a logical approach where successive salient points are built up, one upon the other.

Criterion F: application of analytical and evaluative skills appropriate to the subject

Demanding cognitive effort is needed to apply analytical and evaluative factors created by the student. The analysis and evaluation need to be covered in depth since these will lead to the crux of the argument. There is also an opportunity for the student to use reflexivity—a consideration of his or her own experiences and views that have contributed to the methods used in the investigation and the interpretation of points that have arisen.

Criterion G: use of language appropriate to the subject

Psychology is a subject that uses its terminology in a specific manner and students are expected to show this in their essays. Students who have not studied psychology as a specific part of an academic course are strongly urged to become thoroughly acquainted with the language used by psychologists and how it is applied within the discipline.

Criterion H: conclusion

The conclusion is a synthesis of the argument that has preceded it. It is the end point of a logical process that has been established by employing a succession of psychological studies and theories to justify the case that has been presented.

Criterion I: formal presentation

This criterion relates to the extent to which the essay conforms to academic standards about the way in which research papers should be presented. The presentation of essays that omit a bibliography or that do not give references for quotations is deemed unacceptable (level 0). Essays that omit one of the required elements—title page, table of contents, page numbers—are deemed no better than satisfactory (maximum level 2), while essays that omit two of them are deemed poor at best (maximum level 1).

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