

## May 2017 extended essay reports

### ITGS

#### Overall grade boundaries

<b>Grade:</b>	E	D	C	B	A
<b>Mark range:</b>	0 – 7	8 – 15	16 – 22	23 – 28	29 – 36

#### The range and suitability of the work submitted

The ITGS extended essays submitted for the May 2017 session covered a wide range of research topics. The chosen topics were generally suitable, lending themselves to appropriate primary and secondary research, although they were not always properly explored. Popular areas of research as in previous sessions dealt with social networking, Internet piracy, identity theft, and the Internet itself. Unfortunately, in cases such as these, where the choice of topic was based on the selection of something “easy” to research, the investigation tended to be very superficial. On the other hand, it was observed an increase of essays in topics covered in ITGS HL, such as Artificial Intelligence, and topics with a strong component of Computer Science, such as Blockchaining. In many such cases, the emphasis was too much geared to Computer Science instead of ITGS. Candidates writing essays in ITGS must keep in mind that the essay should cover all areas of the ITGS triangle (IT systems, social and ethical issues, and areas of impact) and avoid covering only one of these areas. Many essays investigated the application of systems in the running of businesses, legal systems, aviation, using ICT tools in school, engineering, medical systems and so on. These were generally appropriate if they were locally focused with candidates having access to personnel in the businesses investigated, but were weak where access was not possible or the investigation was too broad. Some essays were peripheral to ITGS and some were very vague, indicating a failure to grasp the purpose of an extended essay in the subject being studied. Especially when dealing with social networking, there was a lack of appropriate secondary sources and an over reliance on primary sources, in most cases extrapolating the results of a small sample to a much larger universe. Worse than that was when candidates wrote their essays based solely on observation, opinions, and speculation, which happened in many instances. A cause of concern is the large number of statements made in extended essays without the citation of sources or the support of evidence – these usually led to low marks in several criteria, such as E (argument), F (analysis), and H (conclusion).

## Candidate performance against each criterion

### Criterion A: research question

The research question is expected to be clearly stated on the title page and/or in the introduction. It must lend itself to systematic investigation in an extended essay in ITGS. The focus of the essay must be aimed at properly answering the research question. So, it needs to be narrow enough to allow an investigation in depth to be performed. Although most candidates clearly stated the research question, not so many were able to state one that was sharply focused. It was observed that many research questions were unclear, vague, too broad, and/or did not cover the ITGS triangle. Some were in the form of yes/no questions, which hardly ever make good questions. The success of an ITGS extended essay is dependent upon formulating a concise and sharply focused research question. The ITGS Triangle must be apparent, either explicitly or implicitly, in the research question. The research question needs to be supported by adequate secondary research and primary investigations. It must be reviewed periodically and adjustments may be needed.

### Criterion B: introduction

Most candidates failed to fully meet this criterion. The reason for this is the lack of evidence to support the claims made regarding the importance of the topic and why it was worth of investigation. The significance and worth of the investigation should not come only from the students' opinion. There needs to be some evidence provided. The context of the research question should be clearly set in an academic context that demonstrates the importance of the topic. Appropriate evidence includes statistics or other cited material.

### Criterion C: investigation

Good extended essays require both primary and secondary sources for investigation, but many candidates failed to understand this. Secondary research must come from a variety of sources and must be relevant to answering the research question. Only a small minority of candidates gathered a good quantity of material from a wide range of appropriate sources. Too much reliance on a few sources is an indication of poor investigation. Primary research is required to complement secondary research, to provide evidence which supports the arguments and to allow a proper analysis of the claims made throughout the essay. Many candidates did not attempt, or failed to document, primary research. Transcript of interviews must be posted in the appendix of the essay as evidence of such interviews. Whenever primary data is collected, the methodology must be clearly stated within the extended essay and data collected must be included in the appendix in an appropriate format (i.e. summary of raw data from surveys). Unfortunately, most surveys were not well planned and were poorly conducted. In many cases, the methodology was not explained within the paper, the results were not summarized in an appropriate format, and citations in the body of the paper were incomplete and difficult to follow. Many surveys clearly did not have a methodology (participants were selected at random or just from one area, which did not represent a proper sample) and samples were usually small. One of the shortcomings in interview transcripts was the omission of the interviewee's name and position as well as the date of the interview. Questions used in interviews and surveys often did not relate closely to the secondary research that had been done and/or were not relevant to answering the research question.

### Criterion D: knowledge and understanding of the topic studied

The extended essay must show knowledge beyond what is regarded as common knowledge and provide evidence from academic sources. Frequent annotations from examiners include 'no evidence provided' or 'speculative comment'. The candidate's own personal opinions should not be included within the extended essay. Research should include specific examples to demonstrate that the topic is well understood. Overall marks for this criterion were slightly below average levels. Most candidates failed to demonstrate knowledge of relevant IT systems much beyond general knowledge.

### Criterion E: reasoned argument

The essay must include sound and logical arguments focused on answering the research question in the conclusion. Candidates must base their arguments on the wealth of information that they have collected from their research. Not many candidates used materials collected to present ideas in a logical and coherent manner and develop a reasoned argument in relation to the research question. A great number of candidates placed too much emphasis on unsubstantiated statements.

### Criterion F: application of analytical and evaluative skills

Analytical and evaluative skills may be demonstrated through comparisons of information collected from secondary research, analysing data collected from primary investigations and research, and comparisons of information from secondary research with information/data gathered from primary investigations and research. In the essays submitted for this session, most candidates demonstrated little application of analytical and evaluative skills. Most candidates' performance against this criterion was weak. Analysis and evaluation in most cases was flawed. Usually this is the weakest aspect of extended essays.

### Criterion G: use of language appropriate to the subject

Candidates need to communicate clearly and precisely using ITGS terminology. Most candidates have communicated their ideas clearly, but the use of ITGS terminology was below what was expected. ITGS terminology includes both IT terminology and terminology relating to social and ethical considerations. The terminology used in the paper needs to be specific to the research question and go beyond what is regarded as common knowledge. In many cases, terms were not explained, were inaccurate and were not clearly expressed.

### Criterion H: conclusion

The major problem here is coming to a conclusion that does not answer the research question. Many candidates failed to incorporate a conclusion that was relevant to the research question; others provided conclusions that were not consistent with the evidence provided in the essay. A common mistake was to use extraneous content (content not previously discussed) in an attempt to support the claims made in the conclusion.

### Criterion I: formal presentation

General performance in this criterion was at an acceptable level; however, among other issues many candidates did not achieve high marks due citing sources in the essay but not listing them in the bibliography, listing sources in the bibliography which were not referred to in the body of the essay, citing sources in an illogical order in the bibliography, including the abstract (and sometimes the acknowledgements and/or the table of contents itself) in the table of contents, not listing illustrative materials in the bibliography, and not including transcripts of interviews in the appendix.

### Criterion J: abstract

This should be a straightforward criterion for achieving full marks. All the candidates need to do is within 300 words clearly state the research question that was investigated, how the investigation was undertaken (scope of investigation) and the conclusion of the essay. A great number of candidates did exactly that; however, many candidates failed to state the method of investigation or failed to state the conclusion of the essay. In many cases, candidates stated a conclusion that was different to that of the essay itself.

### Criterion K: holistic judgement

This is a holistic judgement based on depth of knowledge and understanding of the topic studied, intellectual initiative and creativity. Usually these are achieved through the extent and nature of the secondary research and primary investigation and research that was undertaken. The supervisor's comments are also very important to guide the examiner on the proper mark to be awarded. Most students got an average score (2).

## Recommendations for the supervision of future candidates

The assessment criteria must be made available and clearly explained to the candidates (step-by-step) before they embark on the development of their extended essays. Teachers must ensure that candidates acquire a clear understanding of the requirements of each criterion. Students need to be taught how to formally conduct secondary research and record information, conduct investigations, surveys and interviews and accurately present the data collected, analyse and evaluate information and data from secondary research and primary investigations and research, and write a formal paper including bibliography, citations, table of contents, abstract and appendices.

As the extended essay criteria for the May 2018 session is a new one, for a proper understanding of all that is involved, it is essential for all ITGS teachers to actively participate in the relevant discussions in the ITGS forum in the OCC