

THEORY OF KNOWLEDGE

Note: This subject report is for the examination sessions November 2011 AND May 2012

In order to secure success for their students, schools are strongly recommended to ensure that this report is read in detail by all TOK teachers, and the Diploma Programme Coordinator. Teachers are also once again directed towards the IB Publication "Understanding Knowledge Issues" (on OCC) which provides clarification of the central concept of a 'knowledge issue'.

Overall Grade Boundaries

There were no changes to grade boundaries from last year:

| Grade | Е | D | С | В | Α |
|------------|--------|---------|---------|---------|---------|
| Mark range | 0 - 17 | 18 – 28 | 29 - 37 | 38 – 47 | 48 - 60 |

Statistical Summary

| | November 2010 | November 2011 | % change | May 2011 | May 2012 | % change |
|------------------|------------------|------------------|-------------|----------|----------|----------|
| English | 3,387 | 3,727 | 10% | 48,143 | 51,666 | 7.3% |
| French | 2 | 3 | 50% | 613 | 545 | -11.0% |
| Spanish | 1,562 | 1,659 | 6.2% | 3,196 | 3,551 | 4.8% |
| German | 0 | 0 | 0 | 20 | 28 | 40% |
| Chinese | 0 | 0 | 0 | 219 | 291 | 32.8 |
| Total Candidates | 4,951 | 5,389 | 8.8% | 52,191 | 56,081 | 7.4% |

The essay

Component Grade Boundaries

Component grade boundaries remained unchanged:

| Grade | Е | D | С | В | А |
|------------|-----|-------|-------|-------|-------|
| Mark range | 0-9 | 10-16 | 17-22 | 23-29 | 30-40 |



Examiners

Thanks are extended to 249 examiners who assessed TOK essays this session – whose individual contributions form the basis for this part of the subject report. Many examiners expressed how much they learned from marking essays and what a positive professional development experience it was. Teachers who wish to become examiners can visit http://www.ibo.org/informationfor/examiners/ for more information (note that teachers must have two years experience of teaching TOK before examining).

Administrative and Clerical Procedures

Once again, candidates and schools are asked to observe the following requests in order to assist with the assessment process:

- ensure that candidates use **DOUBLE SPACING** and a font size of 12
- use a 'standard' font such as Times New Roman, Calibri or Arial
- use default-sized margins without any added border
- write the prescribed title at the start of the essay as stated on the list
- take note of the limits of the word requirement for the TOK essay the actual word-count must be entered when the essay is uploaded
- ensure the essay is anonymous. The electronic coversheet provides the required information.

The first of these points was made vociferously by a large number of examiners. Single-spaced essays are generally more difficult to read on screen for emarking, and it is hard to add annotations when there is insufficient room to do so. It is for that reason too that margins must be at least default-size.

A disappointing number of essays were submitted on titles not prescribed for the current sessions. This can have disastrous consequences for candidates' grades, and may even result in a score of zero. Coordinators, teachers and students are therefore urged in the strongest terms to ensure that they work from the correct list.

From the November 2012 session, there will be a unique set of six titles for each single examination session. This will create proper equity for November and May candidates, and allow title-specific marking notes to be provided for examiners in order to aid them in the assessment process by reinforcing TOK expectations and pre-empting some of the typical uncertainties and questions which arise.

General Comments

A major aim of this report is to point out weaknesses in the work of candidates so that problems can be minimized in subsequent sessions. However, it is also desirable and necessary to celebrate essays of the highest standard that have been read and appreciated this year. One senior assessor noted that "the strongest essays revealed a remarkable



sophistication of insight, clarity of analysis, and elegance of expression that is truly remarkable for an 18-year-old learner".

Examiners this year voiced their frustration with weaknesses in candidates' work that could have easily been avoided. In many cases, they laid the responsibility at the door of teachers:

- "it seems clear that in many cases the teacher has not looked at the essays before they are submitted"
- "in many cases the teachers do not seem to have given much instruction in the construction of arguments or the necessity of proof-reading before submitting the essay"
- "teachers must emphasize the unpacking of titles and make sure students can handle and are familiar with all the formalities of effective, formal writing"
- "one really must ask where are teachers and schools in this process and how do they allow students to send essays in this condition"
- "too many teachers seem 'lost' and do not give their students appropriate guidance, which results in low or failing grades".

It is not so much the existence of errors and weaknesses in the material submitted for assessment that prompts examiners to respond in their reports; but rather the fact that so many of these errors and weaknesses are so avoidable. The role of teachers is vital in guiding candidates towards successful outcomes while still giving them sufficient intellectual independence in their work. This guidance is only possible where there has been a proper TOK course delivered. Some essays reflected little or no TOK – a situation of particular concern. In contrast, there is no doubt when students have had an enriching learning experience through their TOK course.

TOK essays can be written in five response languages as shown in the tables on page 1. Schools new to the diploma programme are asked to pay particular attention to what is required in a TOK essay. A few candidates from these schools presented essays which showed little notion of what TOK is about and virtually no understanding of what is required in a TOK essay. This is perhaps due to creating a course which keeps too close a link to a local philosophical tradition in education, as has been seen in some essays in Spanish, rather than seeing TOK for what it is – not a course in epistemology but in IB "Theory of Knowledge". Teachers should always think about what they expect of a student on completing the course and how to achieve those objectives. Schools which receive poor results in TOK are urged to invest in some of the opportunities for professional development that are available these days, especially face-to-face and online workshops led by experienced practitioners.

While there is still much work to be done, it does seem that candidates have developed a greater awareness of the centrality of knowledge issues (related especially to criterion A) to TOK work. But examiners continue to note:

 "some candidates did not effectively link the knowledge issues they identified with the title of the essay - a practice which risks the examiner deeming parts or all of the essay irrelevant"



- "while it is good to be able to identify knowledge issues, the teachers ought to be making it perfectly clear that these issues must logically follow from the prescribed title"
- "decomposing a knowledge issue into several questions seemed a popular approach, but the problem was that the questions were never answered – more often than not they were left as rhetorical questions"
- "I feel disturbed by the number of students who have evidently been coached to force into their essays an overt listing of 'my knowledge issues'"
- "there was a significant number of candidates who took the knowledge issue from the
 prescribed title and spun it into a new knowledge issue that often moved them off
 topic".

The point is that knowledge issues identified and addressed in essays must arise naturally from the process of unpacking or exploring the title, and this must be done in advance of detailed planning and writing of the essay so that disconnection between the title and the essay is avoided. The identification of relevant knowledge issues should always be the result of sustained prior thought about the title. It is also important to note than some titles may need more unpacking than others, and candidates need to be aware that the shorter titles may well be the ones that require more work at this very early stage as there is less structure provided by the title itself. Too often, weaker candidates are attracted to such titles because they appear superficially more straightforward and candidates fail to appreciate the work that needs to be done in order to construct a viable response. Teachers are encouraged to find opportunities to practise with their students unpacking and exploring the possibilities that titles offer – this can probably be achieved most successfully through the use of prescribed titles from previous years.

Candidates are encouraged, wherever possible, to treat ways of knowing within a context of areas of knowledge (related in particular to criterion A) or supported by concrete examples, in order to avoid treatment in the abstract. Addressing them in isolation or without reference to established knowledge easily leads to anecdotal claims and unsophisticated and unrealistic hypothetical examples which add little to the understanding of learning and knowing.

Teachers should note the prevalence of clichéd claims about the nature of various parts of the course – for example that:

- mathematics is purely a product of reason
- there is one scientific method comprising five sequential steps starting with observation and finishing with a law
- the human sciences struggle to establish knowledge because human behaviour is totally unpredictable
- historians are self-evidently biased and the history they produce is deeply parochial
- the arts are concerned exclusively with the transmission of emotion



moral judgements are relative.

More guidance for students would be welcome here in order to facilitate an understanding that such assertions may be inaccurate, wrong, or at least eminently contestable.

Once again, candidates need to be made aware that hypothetical examples (related most obviously to criterion B) almost never work as support for claims made in essays; it should be emphasised that they function essentially as fabricated evidence, and thus cannot lend weight to whatever argument is being offered. As one examiner notes, "students need to be supported towards gaining awareness that their examples should be authentic and thus based within their IB Diploma programme studies, including CAS, or based upon solid and meaningful examples from the student's more informal personal life experience".

While commonly employed examples, such as the shape of the Earth, the structure of the solar system, origins of the universe, evolution, the Holocaust, art works such as the Mona Lisa or Guernica, etc., can be profitably used in essays, they must always be relevant to the claims being made, and be treated with respect and factual accuracy. But with a modicum of thought, other fresher examples from academic experience are usually within the candidates' grasp. Furthermore, many examiners feel that candidates do not always make use of their own personal heritage and should be encouraged to reflect more on the applications of knowledge issues in their cultural contexts. In this way they will be able to evaluate their own perspectives (criterion B) in relation to the prescribed title.

Examiners routinely comment that often, quality of analysis (criterion C) is the criterion where they find it most difficult to award higher scores. One examiner comments that a particular weakness was found where candidates tended to "offer more of a vague opinion than an analysis, and very rarely offered something original and personal with an analytic approach".

Candidates should be warned of the pitfalls of approaches that are too descriptive or speculative. Some essays lack effective counter-claims, and sometimes they are present but expressed poorly, such that they appear to be contradictions rather than explorations of alternative viewpoints. Candidates should take care with the ways in which they introduce such contrasts. Counterclaims should arise naturally from arguments made or evidence presented and they may, for instance, be in the form of different perspectives or alternative evidence which will need to be evaluated. The metacognitive dimension of TOK lies at the heart of the course, and candidates should be encouraged to take a step back from their own arguments in order to grasp the possible implications of what they are asserting.

Although there seemed to be a slight improvement this year in the treatment of key terms in the titles, in far too many cases, the definitions were still being extracted from various dictionaries. Usually, these definitions are subsequently ignored and thus add no value to the work. It is emphasized once again that this type of use of the dictionary has the effect of closing down discussion and conceptual analysis just when it is desirable to open them up at an early stage in the essay. Rather than trying to pin down a definition of, say, 'knowledge', in a sentence in the introductory paragraph of an essay and risking making the rest of the essay irrelevant, it would seem a better strategy to indicate what is understood by the term by giving examples and stating that a closed abstract definition might be outside the scope of the essay. In the age of the Web, instant access to quotations continues to prove too tempting for many candidates. One examiner wrote: "organization of ideas still poses problems especially



in relation to the use of quotations at the beginning of the essay, and the ubiquitous use of dictionary.com or other online resources to offer definitions in a candidate's introduction doesn't help either." Another wrote: "Brainy Quotes' and other collections of quotations are weak sources and the quotations are often meaningless when taken out of context." Candidates should also avoid the use of bulky footnotes offering lengthy clarifications of terms, concepts or examples – these usually appear to be attempts to circumvent the word limit, and examiners are not required to read them.

Many candidates seem to struggle with overall essay structure (criterion D). In the words of one examiner, "students must avoid writing vague and meaningless introductions and rather use the introduction in a business-like manner in which to unpack key terms and ideas in the prescribed title, indicate the main questions of knowledge concerned..." The introduction has a concrete purpose – to present the candidate's position in relation to the title. Successful essays often set out the scope of the essay in the introduction.

Attention must be paid to the flow of an argument and also to the length of paragraphs. Many examiners complained of inappropriate responses to the requirements for acknowledgements in essays – with some candidates either providing no references at all, or appending vast bibliographies that seemed to bear no immediate relationship to the content of the essay. Candidates and teachers are reminded that references to online sources should include access dates, and that quotations must be linked to references in some conventional manner through citations.

The attention of candidates and teachers is drawn to the word length for the TOK essay. While 1,200 words is an acceptable length in principle, it is often difficult to construct a convincing analysis without making use of the further 400 words allowed. Candidates should be encouraged to make as much productive use as possible of the full 1,600 words permitted. However, candidates should be reminded not to exceed this limit, even by one word, because the penalty associated with criterion D (maximum score of 4) will immediately be applied.

There are now numerous TOK 'textbooks' or 'companions' available to candidates. It is worth reiterating here that such materials can be useful but candidates should avoid undue reliance upon them in their essays. In particular, many essays refer to these books as a source of examples unfortunately taking precedence over the candidates' first-hand experience of areas of knowledge during the course of the IB Diploma Programme. Candidates would be well advised to consider their own contact with their Diploma subjects a rich source for detailed exploration of knowledge issues.

Feedback on Specific Titles

Again there have been reports during these two sessions that students sometimes paraphrased the prescribed title. This sometimes resulted in a lack of focus on knowledge issues; teachers are reminded not to allow students to change the prescribed title in any way. It seems as if some teachers are presenting the prescribed titles to students as "prompts" – the use of this term may suggest that they are mutable to some degree and its use is hence thoroughly discouraged.

As in previous years, candidates appear to have found some prescribed titles much more attractive than others, though quantity did not always correlate to quality, and it is possible



that many candidates chose titles without sufficient careful thought. Four examples of knowledge issues are given for each of the ten prescribed titles. These examples are clearly not meant to be exhaustive or definitive; because each title can be, and usually is, addressed in many different ways, their inclusion here is illustrative. The knowledge issues indicated are in some cases rather general, and might well be refined in the course of an essay.

Knowledge is generated through the interaction of critical and creative thinking. Evaluate this statement in two areas of knowledge.

Four examples of knowledge issues that *could* be addressed in this title:

- To what extent does critical thinking depend on creative thinking, and vice versa?
- To what extent do critical and creative thinking rely on established methods that lead to knowledge?
- To what extent do critical and creative thinking build upon prior knowledge?
- Is it possible to generate knowledge through critical thinking alone?

Responses to this title often, rather predictably, identified the natural sciences as an area requiring critical thinking, and the arts as an area requiring creative thinking. However, some candidates did write about how both types of thinking are inherent in the methodologies of a range of areas of knowledge, and identified counterclaims to the rather clichéd dichotomy – for example, creativity in hypothesis-formation, and critical thinking in the construction of art works and their appraisal by critics. The title generated a plethora of examples in which students claimed to know what was in the heads of famous people. Candidates who chose this title sometimes failed to characterise the two types of thinking clearly, and often waited until the essay was almost concluded before bringing them together and belatedly trying to show how they might have a dynamic and necessary relationship. This was unfortunate because the key to the title lay in a discussion of the nature of the *interaction* between them. Many candidates seemed to take the view that the existence of both types of thinking constituted an interaction in itself.

Compare and contrast knowledge which can be expressed in words/symbols with knowledge that cannot be expressed in this way. Consider CAS and one or more areas of knowledge.

Four examples of knowledge issues that *could* be addressed in this title:

- What is the role of personal experience in the construction of knowledge?
- How do the features of natural language assist or frustrate us in the production and acquisition of knowledge?
- Do propositional and non-propositional knowledge have equal value?
- To what extent can the knowledge gained from CAS be applied in another area of knowledge?



While there may be difficulties in discussing knowledge that is difficult to share, many candidates wrestled particularly unconvincingly with the idea of knowledge that is not expressed in linguistic form. Treatment of CAS seemed to consist largely of descriptive accounts of emotional moments associated with participation in service projects. While the inclusion of personal experience is to be welcomed in TOK essays, it needs to be subjected to the same degree of rigorous analysis as meted out to claims from other sources. Many responses included claims that language is incapable of accurate expression of emotion – usually these assertions were made as if they were self-evidently true, and so no supporting analysis was provided. Candidates sometimes did not seem to know that words are a category of symbols, and treated them entirely separately, often contrasting them with symbolic representation in mathematics.

Using history and at least one other area of knowledge, examine the claim that it is possible to attain knowledge despite problems of bias and selection.

Four examples of knowledge issues that *could* be addressed in this title:

- In what ways can bias and selection make positive contributions to attaining knowledge?
- To what extent can bias and selection be considered as independent influences on the construction of knowledge?
- In order to be accepted as knowledge, must claims be free of bias? Is this possible?
- What are the roles of deliberate and inadvertent selection in various areas of knowledge?

Although there were many competent responses to this title, problems with the identification of key terms still abounded. These primarily concerned either the conflation of "bias and selection" as one concept, or the treatment of bias to the exclusion of selection. Additionally, many candidates focused on justifying or explaining the existence of bias, rather than suggesting how to construct knowledge despite the prior existence of bias. In most cases, history was contrasted with either the natural or the human sciences — arriving at the conclusion that bias is a greater obstacle in history. Again in these comparisons, selection was often ignored, or treated exclusively as a negative, if unavoidable, phenomenon. In those essays that dealt with the business of acquiring knowledge, candidates often exhibited a more nuanced understanding of the methods of the scientist than those of the historian, and this imbalance was arguably responsible for some uncharitable and unwarranted conclusions about history as an area of knowledge.

When should we discard explanations that are intuitively appealing?

Four examples of knowledge issues that could be addressed in this title:

- Are some areas of knowledge more productive of explanations that are intuitively appealing?
- To what extent do intuitively appealing explanations depend on culture or perspective, and how do these factors influence what can or should be discarded?



- What roles do intuition and reason play in the support of explanations?
- Are intuitively appealing explanations more likely to be true than explanations supported by other means?

Many essays on this title started from a deeply flawed foundation. Candidates seemed determined to launch an analysis about intuition as a putative way of knowing and to focus on its role in various areas of knowledge or personal experience. Some candidates simply tried to build an entire argument from a dictionary definition of the term. A majority of essays made no effort to examine what might be meant by an explanation; even when the word was acknowledged, the essay often examined explanations for knowledge derived through intuition, and of intuition itself, rather than the status of explanations of other phenomena that appealed to intuition. These misunderstandings arise directly from a failure to deliberate seriously on the wording of the title and to unpack it effectively, and provide a striking example of the shortcomings of this nature mentioned earlier in this report. Those essays that showed an understanding of the question sometimes produced unhelpful answers – for example, simply that we should discard such explanations if they are wrong. This was fair enough for a starting point for analysis, but often the means by which such explanations could be distinguished from others were not evaluated.

What is it about theories in the human sciences and natural sciences that makes them convincing?

Four examples of knowledge issues that *could* be addressed in this title:

- What is the relationship between a convincing theory and a correct theory?
- Who needs to be convinced by a theory?
- Which features or functions of theories are most effective in making them convincing?
- How convincing does a theory need to be in order to be accepted?

This question was adequately addressed by many candidates. However, numerous candidates failed to develop and delineate clearly the concept of a theory, with a number of unfortunate consequences. Chief among them was the skewing of the response toward a more general consideration of knowledge in the natural and human sciences — often manifested as a critique of scientific method as a whole. Some clichéd versions of this method placed "theory" as the sole final product of science, and thus legitimised the inspection of the entire scientific procedure as a "production line" for theories. Some candidates considered the status of the two areas of knowledge automatically conferred convincing status to the theories they produced; others focused too much on personal response to theories as if the theories themselves had some kind of obligation to be convincing to the average lay person. Others again, perhaps conceptualising theories too loosely, contended that they are by definition speculative, and thus compromised on first principles with respect to their capacity to convince. Stronger candidates contrasted theories in the two areas of knowledge with reference to the differences in their subject matter.



'It is more important to discover new ways of thinking about what is already known than to discover new data or facts'. To what extent would you agree with this claim?

Four examples of knowledge issues that *could* be addressed in this title:

- What counts as a new way of thinking in different areas of knowledge?
- How can we know when a new way of thinking is needed?
- What is the influence of ways of thinking on the collection of data or facts?
- How can the discovery of data or facts and of new ways of thinking work together in the production of knowledge?

Although most candidates came to the conclusion that both new ways of thinking about what is already known and new data/facts are important, many struggled to establish a clear distinction between the two processes. This rendered the subsequent analysis problematic, and often the examples that were offered did not clearly illustrate one or the other type of discovery, or which aspect of the example illustrated which. Frequently, candidates accepted the claim that it is more important to discover new ways of thinking and then proceeded to develop an argument based on new thinking that required, for its basis, new facts. Very few acknowledged that their examples illustrated that the order of events was new facts first followed by new understanding. Stronger essays showed how the two processes can be intertwined in a sort of dialectical relationship, and many invoked the concept of a paradigm to show how the discovery of new facts or data can lead to the development of a new way of thinking, which in turn directs the harvesting of new data and facts according to different principles. Few candidates paused to consider explicitly what "more important" might mean in the title.

'The vocabulary we have does more than communicate our knowledge; it shapes what we can know'. Evaluate this claim with reference to different areas of knowledge.

Four examples of knowledge issues that *could* be addressed in this title:

- What is it about words that empowers them to do more than simply transfer knowledge from one person to another?
- Is it possible for a concept to be incomprehensible to speakers of a particular language if it is inexpressible in that language?
- If the vocabularies of different languages carve out different sets of concepts, what are the implications for knowledge?
- Through their specialized vocabularies, is it the case that the shaping of knowledge is more dramatic in some areas of knowledge than others?

In large measure, this title was not well understood. Many essays, despite the hints in the title, focused almost exclusively on the communicative function of vocabulary, and many



candidates simply equated vocabulary with language in general. The emphasis on language was often exclusive, and few or no areas of knowledge were directly discussed. Some essays took a largely descriptive approach – working through some well-rehearsed material on the Sapir-Whorf hypothesis and the language of the Piraha. Orwell's 1984 was quoted without the caveat that novels do not necessarily describe reality, and without consideration that the author might have been wrong in his portrayal of the power of language. The intention of the title to elicit discussion on how vocabulary is the purveyor of concepts that shape an area of knowledge, constructing the values that order it and the tools that validate it, was seldom recognised. Many candidates reconfigured the title and explained how knowledge is necessarily limited by lack of vocabulary, or that certain types of knowledge do not require vocabulary – thus missing the main point altogether.

Analyze the strengths and weaknesses of using faith as a basis for knowledge in religion and in one area of knowledge from the ToK diagram.

Four examples of knowledge issues that *could* be addressed in this title:

- Is it possible to have knowledge without a contribution from faith?
- Where is the boundary between faith and confidence or hope?
- To what extent is faith a personal way of knowing or a shared experience?
- Is it possible for faith and reason to work compatibly together in some areas of knowledge?

Responses to this title tended to fall into categories. Some candidates asserted the weaknesses of faith as a basis for knowledge but then described their own personal experiences with religion while ignoring the previous characterisation of faith. Others felt so strongly that religious faith and religion as a whole were baseless that they seemed to fail to remember the need for balance in a TOK essay. Some candidates of a religious persuasion appeared to have chosen this title because they thought it would be easy for them, but often the resultant essays did not showcase knowledge issues at the forefront of the analysis. Overall, the impression was that many students trying to write about religion really did not know much about it and were relying on stereotypes they had gleaned from television or other forms of popular media. The most commonly chosen area of knowledge for comparison was the natural sciences, and some essays succeeded in making a convincing case for a role for faith – in the logical processes of science or in the acceptance of basic assumptions without which knowledge could not get a foothold on reality. There were also some sophisticated treatments of faith in economics!

As an IB student, how has your learning of literature and science contributed to your understanding of individuals and societies?

Four examples of knowledge issues that could be addressed in this title:

• Given that the product of literary activity is often fiction, how can it contribute to an understanding of real individuals and societies?



- To what extent is there an overlap between the contributions of literature and science to the understanding of individuals and societies?
- What are the features of the knowledge produced by literature and science that provide us with insights into how individuals and societies operate?
- Could it ever be claimed that the natural sciences contribute more to the understanding of individuals and societies than the human sciences do?

Too often, responses to this title comprised descriptive accounts of material that the candidates had covered in IB classes in literature and either a natural science or psychology. Many candidates took the title as an invitation to praise reflectively the impact that such IB courses have had on their intellectual development. However, the treatment was usually superficial and revolved around the specific content of the texts read in literature and the facts learned in science, rather than making a concerted attempt to examine the nature of these disciplines in order to ascertain *how* they delivered insights about individuals and societies. A frequent problem was that candidates tended to repeat the phrase "individuals and societies" even when they were writing about only one or the other. Some candidates seemed to approach the task from the perspective of writing a world literature assignment (literary analysis) rather than adhering to the imperative to place knowledge issues at the centre of the discussion.

'Through different methods of justification, we can reach conclusions in ethics that are as well-supported as those provided in mathematics.' To what extent would you agree?

Four examples of knowledge issues that *could* be addressed in this title:

- To what extent are the methods of justification in mathematics and ethics different?
- Do the principles of ethical theories and the axioms of mathematics perform the same functions in their respective areas of knowledge?
- To what extent do mathematics and ethics make use of the ways of knowing in similar manner?
- On what basis are methods of justification selected in different areas of knowledge?

Essays on this title tended to polarise between the very good and the poor. Some of the better essays focused on trying to apply the tools and concepts of mathematics to the domain of ethics in order to explore the possibility that the methods of justification in the two areas of knowledge are actually similar. Stronger candidates compared different axiomatic starting points in mathematics (for example, different geometries) with the different principles upon which reasoning in ethics might be constructed. In this way, we might have confidence in the processes of justification in ethics even if the content of the analysis remains contestable. Other essays tried to posit the role of reason in mathematics in parallel with a role for emotion in ethics, but such analyses tended to be less successful as they started from positions that were difficult to compare. Some weaker essays focused too much on the conclusions that mathematics and ethics generate without a due consideration of how they were arrived at.



Presentations

Component Grade Boundaries

The boundaries remained unchanged for this session.

| Grade: | E | D | С | В | А |
|-------------|-------|--------|---------|---------|---------|
| Mark range: | 0 - 8 | 9 - 12 | 13 - 15 | 16 - 18 | 19 - 20 |

Please note that some comments made in previous subject reports have been repeated. This is because weaknesses in the presentations viewed by verifiers this session were once again very similar to those evident in previous sessions. The majority of samples viewed continue to reveal a lack of understanding of this assessment component even though four successive subject reports give clear advice as regards the nature of the presentation (in addition to the guidelines set in the current TOK guide). Moreover, the *Understanding Knowledge Issues* document on the OCC has been repeatedly recommended too. Teachers play a fundamental role in guiding their students towards success in this assessment task and it is thus imperative that teachers read the comments below in order to ensure that their students avoid the persistent misunderstandings about the nature of the TOK presentation.

Administrative and Clerical Procedures

Thanks are due to the team of presentation verifiers who viewed presentations from schools during this session. Once again, about 5% of the schools entering candidates were asked to record some or all of the TOK presentations given by the students for the purposes of confirming the scores awarded by teachers for this internally assessed component of the programme. Some of these schools were selected at random; others were selected on the basis of major inconsistencies in past sessions between performance in the essay and the presentation.

It is worth reminding schools that those selected for any given examination session are notified via the DP Coordinator by the IB Assessment Centre early in the diploma cycle that culminates in that session. For example:

- schools selected for the November 2012 session will have been notified by <u>March 2011</u>
- schools selected for the May 2013 session will have been notified by September 2011
- schools selected for the November 2013 session will have been notified by March 2012
- schools selected for the May 2014 session will be notified by <u>September 2012</u>

Schools that have been asked to provide presentations for verification must observe the requirements outlined in the Appendix to this report. Some schools did not do so this year and there were cases of poor audio or interference in recordings which made it hard for verifiers to



see or hear the presentations. In such instances it is difficult for verifiers to award appropriate marks and the verification process may become less reliable. Several schools also sent their presentations very late and schools are reminded to meet the deadlines stipulated. There were instances of schools not recording presentations despite being requested to do so. These schools will be notified to record candidate presentations in 2014.

Forms

There were some clerical problems this session once again:

- most schools used the old TK/PPD and TK/PMF forms instead of the streamlined TK/PPM Form. Schools are asked to note that there is one form the TK/PPM Form (presentation planning and marking form) instead presentation planning on one side and the assessment on the reverse
- some schools sent all the presentation material and forms and left the selection of the sample to the verifier, which is not appropriate
- some TK/PMF forms sent lacked any written comments from candidates or teachers
- it was sometimes difficult to read the name of the teacher
- the duration of the presentations was at times either not filled in, or not filled in with the correct time.

Please see the appendix for correct procedures for submission of presentation samples.

It is important that the TK/PPM form is correctly filled in, and this is not just procedural. The "presentation planning" part of the form is intended to help students by guiding and structuring their planning and must thus be completed before the presentation. Some schools left the "presentation planning" section blank or there was little filled in, and few justifications were offered on the reverse side by the candidates or the teacher for the marks awarded. In cases where the paperwork was treated in so cavalier a fashion, it is perhaps not surprising that the content of the presentations themselves reflected some deep misunderstandings of the nature of the TOK presentation task.

Assessment issues

Teachers are reminded of the dual role of presentations in TOK. While the presentation is a formal *summative* assessment requirement for TOK, it is also intended as a *formative* opportunity for students to contribute a meaningful lesson to the TOK course in which they are participating. This second reason provides a further impetus to the need for effective planning – so that other students will benefit from the presentation.

The presentation must obviously be a presentation. There were examples this session of presentations which took the lesson-for-the-class idea to extremes because, although contributions from other students are permitted, recordings showed that it was the audience and not the designated presenter who was providing most of the relevant content with the presenter acting as some sort of master of ceremonies. It is difficult to credit these as



"presentations" at all. Even where the presenter is in control of the presentation, such a format militates against any clear structure because it continually relies on the contingent contributions of others. The presenter needs to be the primary generator of content.

While it is pleasing to note, in the words of one verifier, that "it seems that candidates are generally aware of the primacy of TOK terms and concepts in their work" there is still a lot of work to be done. Candidates made reference to areas of knowledge and ways of knowing, but a further layer of depth of analysis is required for the presentations to be worthy of the highest grade. There is a far greater chance of success in this endeavour if students start by choosing real life situations that are more closely associated with the learning or generation of knowledge in academic disciplines. Furthermore, success can only be achieved if a good initial knowledge issue is identified and candidates still have problems in this respect. The intention of the TOK presentation is to address a single knowledge issue (not multiple ones) that is not only precise but also general (i.e. applicable to a wider range of situations than simply the one chosen) and couched in the concepts and vocabulary of TOK (see the linking questions in the guide for help in this respect). Schools have been directed to the Understanding Knowledge Issues document on the OCC and its use in the classroom has been recommended. Students should be given the opportunity to study and discuss the contents of the document so that they can see the extra quality of good knowledge issues and try to emulate them.

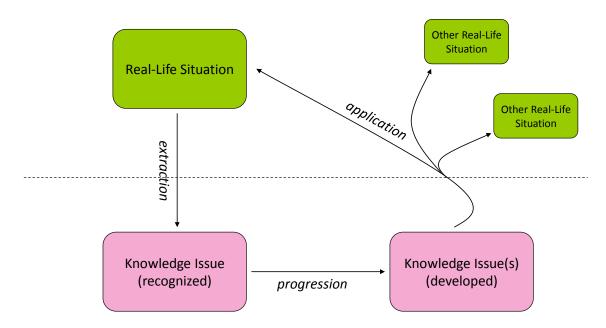
There is still concern amongst verifiers that an understanding of the goals of the TOK presentation has not been achieved in some schools. This may be due to either insufficient or inappropriate guidance from teachers – hence the strong plea at the start of this report. This may explain why many presentations of poor standard were marked very generously by teachers and verifiers found it unavoidable in those cases to deduct marks from the assessments made by teachers. Verifiers are deeply concerned about viewing so many presentations in which students clearly invest much time and effort, but to little effect as the outcomes are almost entirely descriptive and lacking in analysis. This is a problem of relevance; specifically, presentations are not focused on knowledge issues.

We cannot stress strongly enough that the TOK presentation is NOT a descriptive research project; NOT a social studies "report" or "monograph" on some subject of general interest. Without a focus on knowledge issues, presentations cannot deserve major credit on the assessment criteria (criteria A and B are almost certain to score zero for research projects, and a very low mark for D is very likely). They *can* be very good *presentations*, but are very poor *TOK presentations*.

The TOK presentation is supposed to focus on analysis, not description, and, in order to do this, a real life situation must be connected to a knowledge issue. Thus, the core intention of the TOK presentation essentially takes the form of an analytical dialogue between two levels of discourse. This is illustrated by the following diagram:



Theory of Knowledge: Presentation Structure



The two levels represent the students" experiences in the TOK course (lower level) and in the world beyond it (upper level), and the connection between the levels demonstrates the relevance of TOK to life beyond the TOK classroom.

At the "real world" level, we have the real-life situation from which a knowledge issue (note that "knowledge issue" here is singular, corresponding to criterion A) must be extracted. This knowledge issue, residing in the "TOK world", must be developed using ideas and concepts from the TOK course, and in this progression it is likely that other related knowledge issues will be identified (note that "knowledge issues" here is plural, corresponding to criterion B) and will play a part in taking the argument forward. The product of this reflection can then be applied back to the real-life situation at the "real world" level. In addition, the presentation should be able to show how the process of application extends beyond the original situation to others, thus demonstrating why the presentation is important and relevant in a wider sense.

In order to assist students and teachers in understanding this structure, the TK/PPM form requires the written documentation of both the real-life situation **and** the knowledge issue that is extracted from it. The TK/PPM form also requests a title for the presentation – this is intended as a useful summary label that can perhaps be used in a published schedule of presentations for internal school use, but could also be displayed on the DVDs and thus would also assist verifiers in identifying each piece of work.

In addition, it is strongly recommended that the construction by the students of a diagram like the one above, adapted to the individual nature of the planned presentation, be made a part of the planning process. A structured diagram of this sort would ideally be attached to the TK/PPM form and would encourage an analytic exploration of knowledge issues which would likely result in the award of high marks.



The following pairs of real-life situations and knowledge issues are intended to illustrate the sort of relationship that can be constructed between them.

Real life situation: Scientific study which shows that 1970s negative predictions about the environment were wrong

Knowledge Issue: Must all good explanations make successful predictions?

Real life situation: Report regarding vanishing languages

Knowledge Issue: To what extent are language and culture interrelated?

Real life situation: Historian David Irving's views on the Holocaust

Knowledge Issue: How can we know which interpretation of an event in history to accept?

Real life situation: Scientists present new findings in their search for the Higgs boson.

Knowledge Issue: How much evidence do scientists need before they can accept a theory?

Real life situation: Google and our age of information superabundance

Knowledge issue: To what extent have information and communication technologies influenced the ways in which we validate knowledge?

Real life situation – Article which questions the award of the Nobel Peace Prize to US President Barack Obama

Knowledge issue – On what basis can we trust our cultural perspectives with regard to our interpretations of a world event?

Real life situation: The Anders Breivik mass murder case in Norway

Knowledge issue: To what extent should emotion play a role in the evaluation of knowledge claims?

Real life situation: Widespread use of publicity in English in my Spanish speaking country

Knowledge Issue: To what extent does use of a non-native language affect attitudes to knowledge?

Real life situation: YouTube video about the launching of new software for multimedia reproduction.

Knowledge issue: To what extent does the source of information influence one's acceptance of it?



Real life situation: Marc Quinn's "Self", a frozen sculpture of the artist's head made from his own blood.

Knowledge issue: Are there limits to what is acceptable in art?

It is hoped that focusing on the weaknesses of presentations and giving recommendations will serve to guide schools towards better presentations. This is not to say that there were no solid or good presentations. We commend schools who take this assessment task in the spirit in which it is intended and which have produced presentations where students have engaged their knowledge issues effectively through real life situations.

There are other aspects of the TOK presentation that deserve reiteration:

- The presentation must not be delivered from a script while flashcards and other prompts are likely to be helpful, these must be subordinated to the primary nature of the TOK presentation as an oral exercise. Similarly, a presenter turning his/her back on the audience in order to read large quantities of text from a projector is not delivering material in a manner consistent with the intentions of the task.
- The presentation must be a live experience with the intended *formative* opportunity for students to contribute a meaningful lesson to the TOK course. Therefore the presentation must not be filmed by students at home or in another setting, nor be edited.
- The use of movie and YouTube clips must similarly be subordinated to the overall aims of the presentation and not be used as substitutes for thinking and analysis
- The duration of the presentation should be recorded and entered onto the TK/PPM Form

 timings should be compatible with the recommendations given in the Subject Guide on page 47
- While the instructions in the Subject Guide allow for group presentations up to a group size of 5 candidates, the size of the group is likely to affect the structural logistics of the presentation itself. Presentations involving large groups are necessarily long, thus struggle to maintain high levels of interest among members of the audience, and tend to fragment as individual students are assigned particular tasks that are not re-integrated into the whole. On the other hand, presentations by individuals are necessarily very time-limited and candidates need to consider how much they can achieve within this allocation
- Just as good writing enhances the clarity and persuasiveness of an essay, good speaking skills, while not part of the formal assessment, can enhance a presentation. Material that cannot be heard clearly cannot attract credit and cannot contribute to understanding
- The principles of academic honesty must be observed and the need for acknowledgement recognized even in the oral context of the presentation

Appendix

Mandatory requirements for schools selected for verification of presentations.



Selected schools are required to submit (by 15th September for November sessions, and 15th March for May sessions) materials for **5 candidates** (or all candidates if the school is registering fewer than 5 in total). These materials comprise:

- · recordings of the presentations in which these candidates were involved, and
- the TK/PPM forms for the sampled candidates

The selection of the 5 candidates is at the discretion of the school, but should as far as possible reflect the diversity of assessment scores awarded for presentations. For this reason, schools should try to avoid the inclusion in the sample of candidates from the same presentation unless a small overall number of candidates make this inevitable. It is recognized that scores cannot be known in advance of the presentations themselves, and so it may be necessary to record more presentations than will actually be sent to the verifier in order to be sure of capturing evidence for the range of scores required. Many teachers have found that the recording of all presentations in any case has contributed to good practice for subsequent sessions, as these recordings can be helpful during the process of presentation preparation.

Schools are required to send recordings in DVD or USB format only.

DVDs should be sent clearly labelled (examination session, candidate numbers where known, titles of presentations in correct order) and packaged such as to avoid damage in transit (e.g. bubble-wrap or padded envelope). Particularly important is the quality of sound on the recording, and teachers are strongly advised to check this before commencing the actual recordings of the presentations. The quality must also be checked after recording each presentation to ensure there have been no problems. If visual projections form an important part of the presentation, it should be ensured that they are readable on the recording.

As the verification of presentation assessment is on the basis of individual candidates, even if they participated in group presentations, it is vital that verifiers can identify the candidates being sampled. Candidates should announce clearly and slowly their identity on the recording at the start, including names (and candidate numbers if known at the time the presentation is given). Schools may consider asking students to hold up cards with this information at the start of the recording in order to facilitate this. Teachers should also ensure that recordings start well in advance of the presentation.

