

## THEORY OF KNOWLEDGE

In order to secure success for their candidates, 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 the OCC) which provides clarification of the central concept of a ‘knowledge issue’.

The new TOK course, starting with candidates for the May 2015 examination session, refers to ‘knowledge questions’ instead of ‘knowledge issues’, and further clarification on this change in terminology can be found in the new subject guide and teacher support material (also on the OCC).

### Overall grade boundaries

<b>Grade:</b>	E	D	C	B	A
<b>Mark range:</b>	0-16	17-27	28-36	37-45	46-60

### Statistical Summary

	May 2013	May 2014	% change
<b>English</b>	55,594	61,831	11.21%
<b>French</b>	589	565	-4.07%
<b>Spanish</b>	3,916	4,490	14.65%
<b>Chinese</b>	349	420	20.34%
<b>German</b>	39	52	30.00%
<b>Total candidates</b>	60,487	67,358	11.37%

## Section 1: Essays

### Component Grade Boundaries

Essay grade boundaries for this session were set during the grade award meeting after extensive reading and discussion of scripts, as follows:

<b>Grade:</b>	E	D	C	B	A
<b>Mark range:</b>	0-8	9-15	16-21	22-27	28-40

### Examiners

Thanks are extended to 302 examiners who assessed TOK essays this session – whose individual contributions form the basis for this part of the subject report. The comments in a document such as this tend to focus on weaknesses of assessed work, but there are many rewards associated with the opportunity to appraise TOK work from around the world. 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). It is often the case that teachers find examining helpful both in terms of their own understanding of the programme and for the insight afforded with respect to the strengths and weaknesses of their own candidates.

### The TOK dynamic

Successful work in TOK involves a delicate interaction between the teacher, the candidate, and the TOK programme itself. It is perhaps worth providing an outline of the components of this dynamic which should be borne in mind as the rest of this report is read.

### The teacher

The effectiveness of the TOK teacher in supporting candidates requires first and foremost a mastery of the TOK programme. There are numerous opportunities for professional development ranging from face-to-face and online workshops provided by the IB and other approved providers to the everyday collaboration and exchange with school colleagues that may be possible given favourable local conditions. As a basic minimum, candidates need exposure to a TOK course that follows the conceptual distinctions as they are specifically, and in some cases uniquely, articulated in TOK. Whatever the academic background of the teacher, successful TOK teaching demands a degree of adjustment that is not to be underestimated.

Judging by the quality of some of the candidate work presented this session; it is difficult to believe that every TOK teacher has been furnished with the support that is essential for success. In many cases, school administrators would do well to review their investment in TOK, given its centrality to the Diploma Programme and its educational philosophy, its

essential curricular connections with the rest of that programme, and the fact that no one starts teaching it with tailor-made qualifications.

In addition to class teaching, the TOK teacher plays crucial roles in assisting candidates in the production of their essay and presentation (these roles are set out in some detail in the new subject guide – see pages 53 and 56). It is of paramount importance that the nature of this assistance is fully understood by all teachers, and, once again, judging by the work inspected by examiners, it is not evident that this is the case. If it were so, many of the perennial complaints of examiners would be greatly diminished. It is possible to do a major disservice to candidates through both the provision of too little and too much assistance, and the problems that arise from these misjudgments are elaborated below. It is a source of great concern that so many of them need to be described in the subject report every session.

## The candidate

While the teacher's supporting role in them is vital, the primary goal of the assessment tasks in TOK is to provide opportunities for the candidate to demonstrate in a summative manner the impact of the TOK programme on their experience over the period of the course. The ideal outcome is that their performance in these tasks will be the product of sustained critical and reflective thought. The best essays carry a vestigial trace of a struggle to marshal the material and display a mastery that can only be achieved through sustained engagement. While ideals are not always realized, it should nevertheless be the aim of the TOK teacher to provide the conditions in which such engagement can thrive. The evidence from this session's work suggests that there are many candidates who come to the end of their TOK course without having had the kind of experience outlined above. The reasons why this is the case need to be confronted in the longer term interests of the educational value of TOK for Diploma Programme candidates as a whole.

As usual, this report will inevitably catalogue ways in which candidates' ideal experience with TOK can fall short. Increasingly prominent among these ways seems to be, for whatever reason, a weak assimilation of TOK concepts during the course, followed by a search for pre-packaged material that will serve well enough in order to meet at least the minimum acceptable standards in the assessment. As always, it is hoped that the content of this report will serve to assist teachers in helping candidates fulfill their potential in TOK through an extended worthwhile engagement with it.

## The programme

The sections below will once again comment on the degree of candidates' success in handling various aspects of essay writing. Of crucial import here is an accurate understanding of the concept of a knowledge issue (or knowledge question as the equivalent term in the new subject guide – see pages 20-21 of the new subject guide). This is the central concept of the programme, and hence a failure to understand what is meant by the term will lead inexorably to problems in participating effectively in TOK and responding successfully to its assessment tasks.

## Degree and quality of apparent teacher guidance

As in every recent session, the concern was expressed by many examiners that assistance to candidates veers from far too extensive to non-existent.

At one extreme, it seems that candidates are being provided with common templates and formulaic guidance such that there is little room for them to express themselves in their own terms.

At the other (and more common) extreme, there are large numbers of essays that seem to have been written by candidates with no input from teachers at all. Examiners lamented that in such cases teachers must have been either too detached even to read the candidates' work before submission, or lacking in knowledge of what kind of advice to offer. It appeared to some examiners as if candidates had in some cases barely been taught TOK at all, that their work had seemingly been done at the last minute; and all in all there was evidence of a disheartening lack of engagement. As it would be hard to believe that such huge numbers of candidates willfully ignore advice if it is being provided, the temptation is to conclude that many candidates do not receive such advice. Common misunderstandings of what various prescribed titles required would otherwise occur far less frequently.

It was noted by one examiner that the TOK essay task may differ in significant ways from other essay assignments completed elsewhere by candidates, and therefore teacher advice is particularly apposite. The fact that many TOK teachers are not language teachers by trade may exacerbate the difficulties in teaching the compositional skills required, and this may be a contributory factor to the lack of quality found in many essays. Teachers need to find ways to facilitate the degree of clarity in candidates' work without imposing their thinking upon the candidates themselves.

### Key Points

- Some teachers are providing too much input, sometimes with counterproductive results
- Many teachers seem not to be providing any guidance to candidates at all
- The distinctive nature of the TOK essay requires carefully tailored support

## Treatment of knowledge issues

Problems continue to be noted by examiners with respect to the formulation and purpose of knowledge issues. Knowledge issues in a TOK essay should perform the function of stepping stones during the exploration of the prescribed title. They should arise naturally in the course of the analysis and their articulation in that role should provide added clarity to the structure of that analysis. Hence they are not to be thought of as "additions" to the essay; they are questions to which answers are necessary *en route* to an effective response to the title.

Accordingly, when a cluster of knowledge issues is merely listed in the introduction, the candidate's essay often turns out to be ineffective because the knowledge issues are not set out in the context of the relationships that need to exist between them. Alternatively, some candidates pepper their work with numerous knowledge issues that seem to be offered as an

alternative to argumentation - often no response to them is given and they sit in the text undeveloped and ignored. Most harmful of all is the temptation to identify one knowledge issue at the start of the essay and subsequently treat it as the starting point for analysis rather than correctly adopting the actual title on the list as the trigger for that role. While some examiners felt that there was evidence of a tighter grasp of the focusing potential of knowledge issues within the flow of essays, others lamented that many of them seemed to have their origins in the various “help” sites on the internet that are subverting the candidates’ own process of coming to an understanding of the chosen prescribed title.

Teachers and candidates should note that the new subject guide sets out what is meant by a knowledge question (in the terminology of the new programme). Part of this description concerns what is meant by an “open question” (page 20):

“Knowledge questions are **open** in the sense that there are a number of plausible answers to them.”

Readers will note that many of the knowledge questions/issues offered in the title-specific part of this report are couched ways that might appear to demand a definitive answer (“is it a good thing that...”, “is it the case that...” etc.). Such questions could indeed be answered with an emphatic “yes” or “no”, but equally well a response might be, depending upon the specific question, along the lines of “yes but only if x is included”, “not unless y”, or “increasingly so nowadays”. It is the variety of plausible answers to the question that should be taken as the most important measure of its “openness” rather than the degree to which the formulation of the question indicates that such variety is possible. Indeed, the prefixing of knowledge issues with “to what extent...” has become somewhat of a cliché in TOK, and more successful analysis often stem from questions that are put more assertively.

#### Key Points

- Knowledge issues should act as stepping stones that arise naturally in the process of responding to prescribed titles
- A raft of knowledge issues listed in sequence in the introduction lack context and hence often do not provide a clear picture of the shape of the essay to come
- Knowledge issues used rhetorically in the main body of the essay cannot replace analysis and the attempt to provide answers to knowledge issues
- Converting a prescribed title into "my knowledge issue" is a recipe for an irrelevant response

## Treatment of various ways of knowing and/or areas of knowledge

There is little new to add to previous reports here. The first instinct of many candidates is to “translate” titles and their subsequent treatment into what might be termed “WOKspeak”, in which ways of knowing are simply assigned roles in the analysis in a process that routinely involves casual generalizations about science and reason, arts and emotion, and so on. The outcome of this maneuver is that areas of knowledge are presented as if they were meals prepared from particular combinations of WOK ingredients, where the natures of these

ingredients are understood in advance and do not need to be examined further. In the worst cases, the analysis assumes an almost tautological form in that it is obvious that science, for instance, involves certain ways of knowing and its description using this vocabulary is basically an empty re-formulation of the meaning of science that provides no novel insight. Competent responses to prescribed titles need to go beyond this sort of formulaic approach.

Once again, examiners complained bitterly about the gross misrepresentations of history that seem to have become so deeply entrenched. History is an academic discipline concerned with the study of the recorded traces of the human past; it is not the past itself, and historians are not all liars and “victors” in military conflicts; neither are they necessarily journalists or politicians or other people with a parochial axe to grind.

It is sadly still necessary to point out that “perception” in TOK does not mean “point of view”, and that ethics is an area of knowledge in its own right - it may have close links with religion but is not synonymous with it, nor is it concerned exclusively with matters of etiquette.

A significant number of candidates this session confused the human and the natural sciences, with fields such as medicine being misappropriated.

### Key Points

- Ways of knowing are almost never effective if treated as the sole “building blocks” of analysis
- History is a type of academic enquiry carried out by professional historians; the word must not be used synonymously with “the past”
- Although nominally absent from the subjects available in the IB Diploma Programme, ethics is a well-established academic discipline that requires an understanding of its scope and key concepts if it is to be treated well in TOK
- In TOK, “perception” does not mean “point of view” (hence the use of the term “sense perception” in the official TOK literature)

## Use of examples

In previous subject reports, complaints have been made about the use of hypothetical examples. In general, examiners have noted a trend away from them this session. Unfortunately, they seem to have been largely replaced with a suite of real examples that exhibits troubling uniformity. This tendency is observed across schools as well as within them, which speaks to the fact that many of these examples have come from a relatively small range of sources that have been mined by large numbers of candidates. Examiners noted a lack of fresh material, lamenting that candidates are “ignoring much of the potential of their own heritage” or experiences within their own school learning. Examiners attending to responses to the two most popular prescribed titles this session were regaled repeatedly with similar examples, which included those below.

## Prescribed title 1:

1. The Tuskegee syphilis experiment
2. Kevin Carter and his photograph of a starving Sudanese girl and a vulture
3. Marco Evaristti and his installation of goldfish in blenders
4. Günther von Hagens's Body Worlds exhibition
5. Guillermo Vargas and his installation of a starving dog
6. Andres Serrano's *Immersion (Piss Christ)*
7. Nick Ut's photograph of Phan Thị Kim Phúc in Vietnam
8. Arne Svenson's *The Neighbors* - photographs of unsuspecting people in their houses
9. *Catcher in the Rye* (Salinger), *Huckleberry Finn* (Twain), *The Awakening* (Chopin)
10. Banksy graffiti
11. Fritz Haber: ammonia that can be used for production of fertilizers or weapons
12. PETA position on testing of pharmaceuticals and cosmetics on animals
13. The legality of stem cell research in the USA
14. Nazi experiments on concentration camp inmates

## Prescribed title 4:

1. Atomic theory from Dalton to Schrödinger (or more often Bohr)
2. The myth of the flat earth (the "myth" sometimes presented as the fact that the earth is not flat rather than the fact that it is often erroneously claimed that most people thought it was!)
3. Heliocentrism, Copernicus and Galileo
4. Spontaneous generation and the experimental work of Louis Pasteur
5. JFK assassination and various conspiracy theories
6. Lobotomy and bloodletting as outdated medical practices
7. The belated discrediting of thalidomide as a treatment for morning sickness and its rehabilitation as treatment for leprosy
8. The realization (often presented as an astonishing revelation!) that Columbus was not the first foreigner in America

9. The planetary status of Pluto: the re-classification often presented as a "discovery"
10. Three Cold War theories: traditional, revisionist, post-revisionist
11. The treaty of Versailles compared with the Marshall Plan
12. The phlogiston hypothesis and the discovery of oxygen
13. Phrenology and its demise
14. Euclidian and non-Euclidean axioms and geometries
15. Japanese history textbooks concerning culpability for events in China during WWII

While many of these examples are interesting and are unquestionably relevant to prescribed titles this session, it is their ubiquity on a global scale that is so troubling (the lists may appear long and diverse but they need to be set in the context of the assessment of about 67,400 essays). It is easy to conclude that at some point in the journey from the TOK classroom to the final essay submission, be it from the teacher's lesson planning or the candidate's search for suitable material, personal thought and reflection has given way to expediency. Furthermore, some "examples" that candidates use may be rooted in reality but are extended into sweeping categorizations that distort it beyond tolerance (eg all Christians rejecting the theory of evolution or science as a whole).

#### Key points

- Hypothetical examples are almost never convincing when offered as support for assertions in essays
- Examiners greatly appreciate effort by candidates to use examples that arise naturally from their own experience
- Candidates whose examples match those to be found on TOK "help" sites, or in other online discussions specifically concerned with the task of the TOK essay, struggle to demonstrate a mastery of them, and trigger suspicion in the minds of examiners as to the provenance of the work as a whole

## Treatment of key terms in titles

Many candidates consider "knowledge" itself to be a key term in their work, regardless of the prescribed title chosen. Naturally, this is appropriate in a course called Theory of Knowledge, but the outcome is that colossal numbers of candidates feel unable to avoid claiming in their first paragraph that knowledge is the same as justified true belief. The overwhelming majority of these candidates then have neither any further comment to offer about this definition nor how it might impact what they write in the rest of the essay. This is the case even for a title such as number 4 in this session where the claim that needs inspection so clearly challenges this definition and makes it difficult to sustain. As with most definitions, this one tends to close down discussion rather than provide a platform for exploration of knowledge issues, and is so narrow that it makes treatment of large swathes of the TOK programme extremely difficult.



The new TOK programme exhorts teachers and candidates to take a different approach to the concept of knowledge with the express intention of avoiding these unnecessary and debilitating problems (see new subject guide - page 16).

The unpacking process that needs to be undertaken as a first step in appraising any prescribed title often seems to be very badly handled (please refer to the new subject guide once again - page 53 for an outline of the essay-writing process that is not only recommended but may be subject to interrogation during final essay upload). Perhaps encouraged by previous educational experiences, candidates find it extremely difficult to resist instantly turning to a dictionary for support, even when the terms under consideration are familiar to them and are cognitively accessible. A true conceptual approach recognizes that there is always some "wiggle room" within which the meaning of key terms can flex - allowing, within limits, the relationships between those terms to assume different and interesting forms. Such is the foundation upon which a successful analysis can be built.

The teacher has a crucial and subtle role to play in making this foundation possible - there is a need to model this process and emphasize its crucial impact on the final product. At the same time, it is important to recognize the difference between key terms and other connecting words in the title that do not merit lengthy discussion – thus avoiding an overly pedantic approach. This also often requires teacher guidance.

Hampered by a failure to complete the unpacking stage satisfactorily, many candidates stumble onward toward exploration and planning phases that have no secure foundations (or toward writing the essay without rigorous exploring or planning either).

### Key points

- Definitions can close down the kind of analysis encouraged in TOK rather than enable it
- Offering definitions for key terms and then ignoring them is a waste of words
- "Justified true belief" is an unsatisfactory definition for knowledge in the context of TOK that is not well suited to an inclusive approach to knowledge issues
- Unpacking and exploring prescribed titles (and planning the essay structure from the exploration) are key steps in the TOK essay task that require thoughtful and measured support from teachers

## Overall crafting of essay structure

Shortcomings in this area include:

- An obvious lack of proof reading, or seemingly inappropriate proof reading with track changes left visible that suggest that teachers have micro-edited the text
- A paucity of paragraphs and/or poor transitions
- Essays submitted that are outside the permitted word limits
- Essays that get mired in linguistic analysis at the start

- Essays that read as if the candidate's chief aim is to get over the line to 1200 words (teachers and candidates should note that from next year there will be no minimum word count as it is expected that essays will approach the 1600 maximum or may suffer through lack of content)

## Quality of analysis

As always, examiners cited this aspect as the most challenging aspect of the essay task, and often the least satisfactory in practice. Many essays are riddled with generalizations rather than evidence of close attention to specific claims, with descriptions of processes rather than a focus on the mechanisms that might bring them about, and rhetorical questions intended to stand in for the analysis itself. It is not uncommon to see candidates bogged down in definitional squabbles that prevent the essay from reaching any satisfactory point of departure.

As with the construction of an exploratory essay at the macro level, the construction of requisite argumentation at a more micro level is a skill that needs to be taught, modeled and practised.

These points have been largely addressed elsewhere in this report.

## Factual Accuracy and Acknowledgement of Sources

Just a few points here:

- Candidates need to be reminded of the need to connect claims in the essay with references at the end through the use of citations; otherwise the requirements of academic honesty are not fully met
- As the TOK essay is intended to provide an opportunity for the candidate to set out her own thinking, essays that rely heavily upon acknowledgement of teachers' notes may be looked upon with some suspicion
- Bulky footnotes should be avoided – especially if they are an obvious attempt to circumvent the word limit
- A new method of beating the word limit is to run words together without spaces between them – this is an awful practice that really should cease

## Presentation of Work

Yet 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
- Avoid adding a paraphrased or otherwise altered version of the prescribed title
- The use of a cover page from which the candidate can be identified by name or candidate number must **not** be used
- 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

Despite the request for double-spacing that has been repeated in every subject report over recent years, many candidates and schools are still not complying with this simple measure. Single-spaced essays create significant and totally avoidable difficulties with the marking – many examiners find them hard to read and they create difficulties with the insertion of comments that aid the assessment process. It is strongly recommended that teachers spread the word that candidates who insist on presenting work in this fashion are doing themselves no favours with examiners.

## Feedback on Specific Titles

1. Ethical judgments limit the methods available in the production of knowledge in both the arts and the natural sciences. Discuss.

Seven examples of knowledge issues that *could* be addressed in the development of an essay on this title:

- What counts as a method in the natural sciences and in the arts?
- On what foundations should ethical judgments about methods in the natural sciences and the arts rest?
- Is there more agreement in the natural sciences or the arts regarding what is ethical?
- Is it the practitioners in the natural sciences and the arts or is it the societies in which they operate which exerts a greater influence on what is ethically acceptable in these areas of knowledge?
- To what extent do ethical judgments about methods in the natural sciences and the arts vary by time or place?
- To what extent does the natural exploration of ethical issues in the arts intensify scrutiny of the methods employed?
- Are there circumstances in which the value of the products of the natural sciences or the arts overrides any concerns as to how these products were arrived at?

Candidates selecting this title often found themselves in difficulties with (a) consistently focusing on the production of knowledge with (b) deciding what counts as a method in the arts that could be contrasted with scientific methods. There was also a tendency to define ethics as an area rather than ethical judgments more specifically – it was often evident that candidates

were not clear about what could constitute an ethical judgment in the specified areas of knowledge. More successful approaches acknowledged that “production of knowledge” could refer to what the artist produces or to what the audience gleans from the work, and hence there could be methods for the production of the art work itself but also the “content” of the work could be regarded as a “method” for reaching that audience.

Responses often cited animal testing and stem cell research in science and censorship and work designed to shock in the arts. Many candidates agreed with the claim and the most popular stance was that “limiting” occurred more in the sciences than in the arts due to the nature of those areas of knowledge. Many candidates discussed examples of objections to work in either science or art, and then drew the conclusion that these objections limited the production of knowledge, but the contradictory fact that the existence of the work suggests the opposite was seldom acknowledged. This was particularly common in the arts, where the most common approach was to discuss an existing work of art and explain why some people find it unethical. There was a widespread tendency to rely on outliers and treat them as models for the arts in general. While those examples do make points relevant to the title, they do not reveal a good understanding of how knowledge is generally produced in the arts as an area of knowledge.

Some candidates argued that the ethical judgments which limited the production of knowledge forced scientists or artists to find more innovative or imaginative ways to produce knowledge and thus had a positive effect.

**2. “When the only tool you have is a hammer, all problems begin to resemble nails.” (Abraham Maslow) How might this apply to ways of knowing, as tools, in the pursuit of knowledge?**

Seven examples of knowledge issues that *could* be addressed in the development of an essay on this title:

- How can we know that the deployment of ways of knowing that exists in areas of knowledge is the most effective arrangement for the pursuit of knowledge?
- To what extent does our particular repertoire of ways of knowing affect our personal conception of knowledge?
- Are ways of knowing best thought of as distinct tools with different functions?
- To what extent is the hammer analogy appropriate if ways of knowing regularly act in concert?
- To what extents do the natures of ways of knowing vary in their nature according to the areas of knowledge under discussion?
- Is it the case that we categorize knowledge problems according to the ways of knowing at our disposal?
- To what extent are we capable of conceptualizing problems for which we do not possess the appropriate tools?

In many cases, candidates missed the nuance of the quotation, replacing it with the simpler task of evaluating the reliability of various ways of knowing, sometimes resulting in a "grand tour" response in which the essay was organized by way of knowing – one at a time. This frequently led to examples that were entirely out of personal everyday experience and not academic examples from the areas of knowledge. Accordingly the common approach to this title was to argue that trying to use one way of knowing in isolation from all the others results in a failure to produce effective knowledge – candidates seem to have assumed that the reference to "ways of knowing" meant "one way of knowing" rather than the ways of knowing as a system.

On some occasions, ways of knowing were not addressed at all, but replaced with areas of knowledge or other concepts such as "belief", etc. Many essays in Spanish showed superficial and simplistic understanding of ways of knowing. Reason seems particularly poorly considered and many candidates do not seem to know what to say about it.

Very few essays on this title actually addressed the title, which does not ask "is the use of one way of knowing effective?" but, rather, asks "does the nature of our ways of knowing shape the way that we perceive and approach problems?" Some essays even treated hammers and nails literally and completely missed the intended analogy.

**3. "Knowledge is nothing more than the systematic organisation of facts." Discuss this statement in relation to two areas of knowledge.**

Seven examples of knowledge issues that *could* be addressed in the development of an essay on this title:

- What counts as a fact in different areas of knowledge? Do all areas of knowledge deal in facts?
- To what extent can areas of knowledge be characterised by their factual content and organised structure? Is this a sufficient description?
- What criteria could be used in order to organise facts in a systematic fashion?
- What room is there for personal interpretation in a system of organised facts?
- What room is there for cultural differences in a system of organised facts?
- What assumptions are implicit in the (supposedly incomplete) description of knowledge in the title?
- When an area of knowledge presents rival edifices of organised facts, on what basis can we choose between them?

In many cases, candidates treated facts in a simplistic manner, and the notion of systematic organization was often brushed over. Many candidates then claimed that knowledge is much more than the systematic organization of facts because facts have to be interpreted or applied – ignoring the possibility that the act of interpretation or application might itself be a kind of organization – the question of how facts get organized except through analysis and interpretation and/or application was commonly left unaddressed.

Other candidates who did tackle the question of organization tended to limit their thinking to very formal structures such as the periodic table of elements or the Linnaean classification system – they seemed to struggle with the idea that the connecting of facts to each other in order to make sense of them is a kind of systematic organization.

A problem with responses to this title was that some candidates looked immediately to what could be added to the formulation for knowledge offered in the title. Commonly the result was that candidates tried to build an alternative architecture for knowledge without using the prescribed title as a starting point.

Several candidates ignored the definition given in the title and immediately referred to justified true belief, and then asked whether this definition constituted a systematic organization of facts. While this approach could be considered relevant, it tended to result in a very descriptive comparison of the two definitions.

**4. “That which is accepted as knowledge today is sometimes discarded tomorrow.” Consider knowledge issues raised by this statement in two areas of knowledge.**

Seven examples of knowledge issues that *could* be addressed in the development of an essay on this title:

- Is the discarding of accepted knowledge a routine feature of areas of knowledge?
- By whom might an accepted knowledge claim legitimately be discarded? Who is empowered to accept it in the first place?
- Do the changes in knowledge over time imply changes in the standards for justification?
- Is it a good thing that knowledge claims are accepted, only to be abandoned later and superseded by other knowledge claims?
- Are there different standards for accepting or discarding knowledge in different areas of knowledge?
- Do the processes of accepting and discarding imply that progress is being made in areas of knowledge?
- Given the continual accepting and discarding of knowledge, what are the implications of maintaining that knowledge is justified true belief?

This was a hugely popular question. Despite what seemed to be a clear invitation to challenge the “justified true belief” model for knowledge, many candidates clung tenaciously onto it, with some bizarre outcomes as the analysis unfolded. Responses often offered description of changes associated with acceptance and discarding, but not so much the mechanisms that drive these cognitive processes. This kind of omission was often associated with a failure to transcribe the second part of the title about considering knowledge issues.

Candidates were able to bring up appropriate but quite obvious examples of knowledge that changed over time. Many of these papers were competent, but many also lacked any real

insight or sophistication. Very many essays regurgitated what candidates had probably learned in class relating to Kuhn and paradigm shifts.

Better essays showed a sophisticated understanding of the difference between knowledge being formally discarded among professional practitioners (shared knowledge) and outdated information being retained by individuals or groups in society. Occasionally, candidates were able to discuss the means by which outdated knowledge continues to be promoted, such as through school textbooks.

History and the natural sciences were probably the most commonly chosen areas of knowledge for this title, as they are favourable to the introduction of the idea of paradigms. Sometimes, however, candidates just talked generally about the concept of a paradigm shift without actually demonstrating it through examples, and candidates who chose two areas of knowledge which were quite similar in nature with regard to the title neglected other areas of knowledge which might pose difficulties for the proposition.

**5. “The historian’s task is to understand the past; the human scientist, by contrast, is looking to change the future.” To what extent is this true in these areas of knowledge?**

Seven examples of knowledge issues that *could* be addressed in the development of an essay on this title:

- How does understanding differ, if at all, from knowledge?
- What methods are used in history to go about understanding the past?
- If an aim of the human sciences is to change the future, what is it about their nature and methods that make this possible?
- If the aim of history is not to change the future, what is it about its nature and methods that make this impossible?
- To what extent do the human sciences provide an understanding of the past?
- To what extent should it be expected that areas of knowledge make normative judgments (deciding what should be the case) rather than merely descriptive ones (describing what is the case)?
- What is it about the methods of an area of knowledge that allow it to make predictions?

In some ways this was perhaps a seductive title - easy to start responding to but also tempting to leave rather complacently at an elementary level. Thus it was frequently asserted that human scientists do look to change the future but little questioning as to why or how this may be done. There were many general answers that contained few assertions that could be regarded as objectionable, but did not kick onwards to offer a compelling analysis. Some candidates became mired in the all too common railing against historians as untruthful individuals who generally indulge in reprehensible behaviour in the narrow interests of their own nation. History as an area of knowledge continues to be very badly treated – some candidates seem to think that historical understanding is achieved only through the lay person

labouring to extract some modicum of truth from the biased and untrustworthy accounts of the historians themselves. It is an extraordinary caricature.

Many essays showed confusion between history as a discipline – with its methodology and focus – and the description of a historical event, or the past itself. Additionally, human scientists were often treated in such vague and general terms that it was not evident that the candidate knew who they might be. Sometimes s/he morphed into a natural scientist; or human sciences were considered to extend into the field of medicine.

A few candidates did try to argue that psychiatrists try to influence the future life of their individual patients, but this example seems to miss the general methodology of the human sciences. A practising therapist is not really doing human science, just as a practising physician is not really doing natural science. An overt discussion of the breadth of activities that get lumped together as human science could be quite interesting, but was seldom attempted.

**6. “A skeptic is one who is willing to question any knowledge claim, asking for clarity in definition, consistency in logic and adequacy of evidence” (adapted from Paul Kurtz, 1994). Evaluate this approach in two areas of knowledge.**

Seven examples of knowledge issues that *could* be addressed in the development of an essay on this title:

- Under what circumstances does it make sense to question all knowledge claims that one encounters?
- Does all reliable knowledge depend upon clear definitions of terms?
- What might be the implications of demanding logical consistency in knowledge?
- What counts as evidence in different areas of knowledge? Do all areas of knowledge rely on evidence?
- Are there stances with respect to knowledge that might be at least as effective as that of the skeptic?
- What might have been the effects of a skeptical attitude on the development of knowledge?
- What assumptions about the importance of ways of knowing can be detected in the claim in the title?

Some candidates suffered with this title from their decision to ignore the specific attributes accorded to the skeptic in the title. Also, as often happens with questions where several concepts require explanation, not all of the concepts are considered or they are bunched together as if meaning the same vague thing. For these reasons, few of the few essays which tackled this question showed a clear and convincing understanding of “clarity in definition, consistency in logic and adequacy of evidence”. It was a most unpopular question, particularly so in Spanish. Some candidates in both English and Spanish simply equated skepticism with doubt and produced essays that veered from unfocused to meaningless.



A common approach was to consider whether skepticism is useful or not. Another problematic approach was for candidates to assert that "a skeptic would..." take some approach or other, without considering any real-life examples of skepticism at work in the area of knowledge. Some excellent essays investigated the ways in which skepticism is (or is not) embedded in the everyday practices of the scientist, historian, artist, ethicist, or other, and considered overtly the degree to which the nature of that skepticism was well-represented by the three qualities listed in the title.

## Section 2: Presentations

### Component Grade Boundaries

The boundaries remained unchanged for this session

<b>Grade:</b>	E	D	C	B	A
<b>Mark range:</b>	0-8	9-12	13-15	16-18	19-20

**All teachers, whether new or experienced, should read the comments below which outline recommendations for success in the oral presentation task. Although this is the last May session with the current assessment instrument, the nature of the oral presentation task itself has not changed and, therefore, the comments and advice continue to be relevant.**

### Verification

As has been the norm, about 5% of the schools entering candidates this session were asked to record some or all of the TOK presentations given by the candidates for the purposes of confirming the scores awarded by teachers for this internally assessed component of the programme. This procedure is called **verification**. 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.

Schools selected for verification are notified via the DP Coordinator by IB Cardiff at the start of the diploma cycle that culminates in that session. For example:

- Any schools selected for verification in the November 2014 session **will have already been** notified by **February 2013**
- Any schools selected for verification in the May 2015 session **will have already been** notified by **August 2013**
- Any schools selected for verification in the November 2015 session **will have already been** notified by **February 2014**
- Any schools selected for verification in the May 2016 session **will have already been** notified by **August 2014**
- *NB* Procedures pertaining to recording of the presentations for verification purposes can be found in the IB handbook – section B.8.6.4. Further details will be communicated to selected schools *directly*.

Verifiers commented that a few presentations were largely read (either from the screen or a prompt sheet) and teachers must ensure that their candidates know that this is not permitted. Therefore, teachers should not evaluate presentations where there is too much reading. In

such cases the teacher must **stop** the presentation as soon as it is evident that there is too much reading and tell the candidate/s that it must be prepared properly and presented on another occasion.

Videos were used in some presentations but most often they did not serve any useful purpose to the requirement of the presentation. Candidates should be advised to keep usage of video to a minimum and if they do use video they must ensure that it is used in the analysis.

Some presentations viewed by verifiers exceeded the allowed length of time. Currently presentations should be approximately ten minutes long for an individual presentation and up to thirty minutes long for a group presentation of up to five candidates (in the new guide it is up to thirty minutes for a maximum of three in a group). For some verifiers this was a widespread phenomenon and it is, of course, unfair for an individual presentation to be twenty minutes long, or even longer.

#### Key points

- Presentations which are read (or largely read) should not be evaluated but stopped and redone properly
- If video clips are used they must be brief and used to support the analysis
- Time limits must be respected

### Moderation (from May 2015 session)

In recent years, verification has provided the only route for examiners to judge the quality of presentations taking place in schools. However, from May 2015, the introduction of **moderation** for all presentations will afford a much wider range of material upon which to draw in providing feedback in the subject report. Each candidate will be required to complete a **TK/PPD Form (presentation preparation document)** that must be made available to IB for moderation purposes. The structure of this form is described in the new subject guide (page 57), and the form itself is available on the TOK home page of the OCC. Teachers are reminded that the TK/PPD form is the main basis upon which moderation judgments will be made.

Further details concerning moderation procedures will be provided in the form of news items on IBIS as the submission deadlines for the M15 session approach. In the meantime, candidates who have already completed their final TOK presentation should complete copies of the form and submit them to their teachers, who will complete their section as well.

#### Key points

- The planning preparation form TK/PPD is more than a formality; it should be used by candidates to structure their presentations in advance of delivery
- The planning preparation form TK/PPD takes on a very important additional role from the May 2015 session as it provides the evidence upon which moderation of presentation scores will be made

- The real-life situation and the knowledge issue must be clearly distinguished on the TK/PPD form, with the real-life situation expressed as a knowledge claim and the knowledge issue as a question about knowledge

## Assessment Issues

The presentation should be an integral part of the TOK course and complements the essay. While the presentation is a formal *summative* assessment requirement for TOK, it is also intended as a *formative* opportunity for candidates to contribute a meaningful lesson to the TOK course in which they are participating. It is thus recommended that candidates do more than one presentation in their TOK course.

There has been an improvement in the standard of oral presentations according to verifiers this session. Some schools have clearly “got it” and their candidates did exactly what was intended. We commend schools who take this assessment task in the spirit in which it is intended producing presentations where candidates have engaged their knowledge issues effectively through real life situations.

However, there are still problems with the two main ideas of the presentation –the real life situation and the knowledge issue/s and this is obviously a matter of concern, which teachers need to address. As one verifier put it “many presentations did not go anywhere near TOK territory preferring to remain either within the real life situation itself or an area of knowledge”.

The real life situation (RLS) is not *the* focus of the presentation but a starting point from which to explore larger issues or questions of knowledge. The RLS may come from anywhere but is best when it is a topic which interests the candidate and comes from a candidate’s real experience or contact with the outside world. The RLS should not be a broad topic, but a concrete, substantive, **real life** situation. When candidates choose very broad topics such as beauty, abortion or euthanasia they end up giving presentations which are hypothetical because candidates make up beliefs and attitudes which they suppose people *might* have. As one verifier put it, “candidates cannot be knowledgeable enough to imagine what real people do in real situations in a very accurate way. So we get hypothesized generalities”. It is strongly recommended, therefore, that teachers ensure that their candidates choose a concrete RLS rather than an abstract or vague one.

The concrete real life situation must be the starting point from which a knowledge issue (KI) is extracted. The RLS will refer to a knowledge claim, whereas the KI needs to be expressed as a question – this is to help the candidate(s). By expressing the KI as a question, candidates are more likely to see that an analytical response to the knowledge issue is what is required. Nevertheless, the KI is not just any question and many candidates still seem to find it very difficult to master what is inherent in a knowledge issue. This was seen in cases where the words ‘knowledge issue’ were used to refer to a question within the real life situation or a question within an area of knowledge and not to a question about knowledge and how knowledge could be produced using the methods of an area of knowledge or through ways of knowing.

Candidates started their presentations badly when they did not have a knowledge issue embedded in a real life situation. Apart from KIs ‘identified’ which were not really KIs, there were instances of a KI identified but which was not relevant to the real life situation. It must be

remembered that the KI needs to be **extracted** from the RLS, and also that consideration of the KI will require use of TOK vocabulary and will explore how areas of knowledge produce knowledge.

There was an attempt to show personal involvement in the presentations but this was understood by some candidates as giving an opinion. Personal involvement does not mean “I care about this subject because....” but is a requirement to give the subject matter original analysis and thought. This refers specifically to criterion C (not in the new criteria) and it must be noted that it does not seek the candidate’s personal opinion but the candidate’s ability to analyze and to be genuinely engaged in the topic from a knowledge perspective.

A failure to have a real or concrete RLS impedes candidates from analyzing different perspectives in an appropriate way. Many candidates find perspectives difficult and seem to understand the notion of consideration of different perspectives as a request to express opposing views.

We cannot stress sufficiently that the TOK presentation is not a descriptive research project on some subject of general interest. Without a focus on knowledge issues, presentations cannot deserve major credit on the assessment criteria. They *can* be very good *presentations*, but are very poor *TOK presentations*.

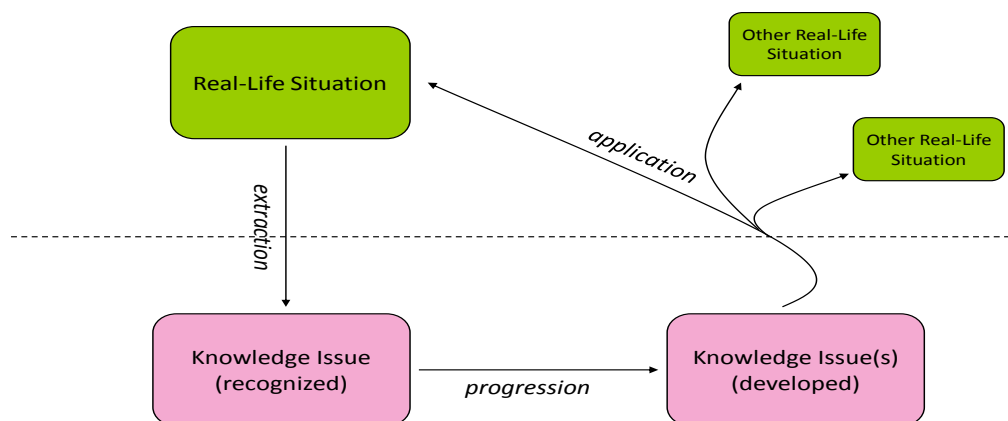
Most candidates had put a lot of effort into the preparation of their presentations but sadly it is clear that the nature of the task still eludes many candidates. The TOK presentation is supposed to focus on analysis, not description, and, in order to do this, a real life situation must be connected to a knowledge issue (*knowledge question* from next year). Thus, the core intention of the TOK presentation essentially takes the form of an analytical dialogue between two levels of discourse as illustrated by the following diagram. Notwithstanding the fact that the diagram has been presented in several reports, there are schools which do not seem to be familiar with this very useful structural diagram. As suggested by one verifier, “future candidates should be shown the diagram with the real life situation above the ‘water line’ and TOK discussion occurring below the ‘water line’ and encouraged to go ‘underwater’ in their TOK presentation”. The waterline marks a boundary between two specific vocabularies, that of the RLS (which may well include vocabulary specific to areas of knowledge) above the line and TOK vocabulary below the line (more general notions such as sufficient evidence, induction, deduction, objectivity, subjectivity, perspectives, underlying assumptions – what in the new curriculum might be ascribed to the knowledge framework). Thus the diagram operates on a number of levels, but most notably illustrates a distinction in types of vocabulary (and therefore analysis) employed. The failure to make this distinction (and remain in the world of the RLS or the area of knowledge) was one of the biggest problems encountered in the presentation verification this session.

### Key points

- A RLS must be a real and concrete situation and not a general topic
- The KI extracted from the RLS must be relevant to it and embedded in it
- Exploration and analysis of a KI will use TOK vocabulary and refer to WOKs and/or AOKs

## Presentation Diagram and Processes

### Theory of Knowledge: Presentation Structure



As outlined above, the two levels represent the candidates' experiences in the TOK course (lower level, 'underwater') and in the world beyond it (upper level, 'above water'), 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 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 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 (**applied onwards**), thus demonstrating why the presentation is important and relevant in a wider sense.

In order to assist candidates and teachers in understanding this structure, the TK/PPD form requires the written documentation of both the real-life situation **and** the knowledge issue that is extracted from it. The TK/PPD 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.

In addition, as said above, it is strongly recommended that the construction by the candidates of a diagram like the one above, adapted to the individual nature of the planned presentation, be made a part of the planning process.

#### Key points

- An understanding of the two levels: the "real world" and the "TOK world" must be evident in a presentation

- Candidates will benefit from using the presentation structural diagram in their planning
- Presentations must have substance and show a sense of progression

## Examples of Starting Points for Presentations

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:** The search for Malaysian Airlines Flight 370

**Knowledge Issue:** In what ways might technology impact our sense perception?

**Real life situation:** BBC article: *Why the brain sees maths as beauty*

**Knowledge issue:** What is the role of aesthetic pleasure in mathematical knowledge?

**Real life situation:** The assassination of John Kennedy 50 years ago

**Knowledge Issue:** How can we separate myth from reality in history?

**Real life situation:** Article in *The Economist* regarding the success of modern science

**Knowledge Issue:** Does competitiveness in science augment the production of knowledge?

**Real life situation:** Map showing the top twenty world arms exporters

**Knowledge Issue:** Does the possession of knowledge carry an ethical responsibility?

**Real life situation:** 2013 Nobel Prize in economics given to trio who disagree about market efficiency

**Knowledge Issue:** What is the role of disagreement in the production of knowledge?

**Real life situation:** Examples of geographical maps which distort the territory

**Knowledge issue:** How can distorted representations give us knowledge?

**Real life situation:** The correlation between smoking and lung cancer

**Knowledge Issue:** How does emotion help or hinder our understanding of correlation?

## Further Advice for Presentations

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

- The presentation must not be delivered from a script (on paper or PowerPoint slides) – 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. If it is delivered from a script, the teacher should stop the presentation as soon as that is evident, tell the candidate/s to prepare it properly and reschedule it for another date.
- The presentation must be a live experience with the intended *formative* opportunity for candidates to contribute a meaningful lesson to the TOK course. Therefore the presentation must not be filmed by candidates at home or in another setting, nor be edited.
- The use of video and YouTube clips must similarly be subordinated to the overall aims of the presentation and not be used as substitutes for thinking and analysis
- 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 presenter/s should face the audience.
- The principles of academic honesty must be observed and the need for acknowledgement recognized even in the oral context of the presentation

### Key points

- The presentation must be a live experience given to other candidates
- Good presentations will be delivered with confidence and clarity
- If PowerPoint is used, it should serve as visual stimulus only and writing on slides needs to be kept to a minimum