

Each premise will need its own support, and this is where you get into the detailed explanation of real-life examples and their analysis, showing both that you understand the nature of the TOK course and that you can create a 'cogent analysis' of the various knowledge questions involved. Your essay might have all the structure and clearly identified theses in the world, but if you don't offer strong evidence for the premises, the arguments amount to nothing. Many students offer clear, convincing but far too abstract points without showing how these ideas work in reality or testing them through appeal to illustrative examples. This suggests that the students are struggling to find real-world application of the concepts of the title, something the examiners want to see.

There is no requirement that you must convince your reader that what you say is true, but you should try to develop a compelling argument, one which is well justified and has clear evidence to support it.

The thing to remember, however, is that *you might not know your thesis when you begin the process*. Which is why, if you are hoping to create a well-polished essay, you should not assume that your first attempt at writing will be the final product. If you have broken your process into the two stages I am suggesting, then this won't be a problem. Whatever work it takes to identify the thesis and how to support it is the first stage, the second stage then is how to present it.

The best essays are generally those which have a clear purpose to them. These can be either discursive or persuasive. However, in my experience, if a student is opting for the discursive essay, he or she will too often fall into the trap of not weaving a coherent narrative out of the various discussion points: the essay ends up simply being a list of barely connected ideas. For this reason, I encourage my students to aim for persuasive essays because doing so means they will (hopefully) keep that main thesis in mind as they write, and each section of the essay will be directly linked.

Even if the essay is a discussion, students can take the main comparative point that I suggested earlier as being essential to a discursive essay and turn *that* into the thesis of a persuasive essay. Alternatively, the main thesis might be descriptive, simply identifying the main comparative claim that is going to serve as the organising feature of the essay: 'The essay title raises challenging questions having to do with reliability in the science, and I will be exploring the variety of issues pertaining this' would serve as a thesis of sorts for a discursive essay.

### ■ What makes a good essay?

#### ■ What to put in the introductory paragraph

Students are often trained to include certain elements in an introductory paragraph: the thesis; some key definitions; a general idea of how the essay will unfold. This is good advice.

Remember, as a rule of thumb, the introduction should serve the same function as a movie trailer: it gives you a hint of the main characters, some indication of the central dilemma and maybe an explosion or two to catch your interest. In your introduction

then, make sure you indicate what you are taking to be the main issues contained in the title and indicate clearly the approach you are going to take. You are not writing a mystery, saving all the exciting twists for the end: tell your reader what you are planning to say and how you are planning to say it.

The introduction should be the last of the sections you finalise before you submit the essay. Go ahead and write one to begin with as this will help you keep on track, but always go back and edit it to make sure it reflects what you actually ended up saying. I have read many essays with really interesting and intriguing introductions which bear no relation to what the student actually ends up writing.

The introduction does not need to include a list of knowledge questions unless they are going to be addressed explicitly in the body of the essay, in which case it should be clearly stated why they are helpful in the understanding of the prescribed title.

#### TOK TRAP

One very common failing of TOK essays is listing knowledge questions at the end of the introduction, but then never addressing them again. If you are going to highlight a knowledge question, you must explain why that knowledge question is relevant to the title *and* engage with it. Do not ever offer knowledge questions as rhetorical devices.

#### ■ What to include in the concluding paragraph

The advice is similar for the concluding paragraph: it must relate to what you have actually written. The concluding paragraph should remind the reader of what you have just argued or discussed but then also indicate (if you have not done so already) what subsequent questions might arise or what unanswered issues might still be pending. This will demonstrate to the examiner that you have something to say about how the ideas you have presented fit into a wider context, both of which will help show 'cogent analysis' and help the examiner push your grade into the higher levels.

#### TOK TRAP

Don't try to craft your concluding paragraph into some grand summation, or spend too many words on it. Your main effort should be spent in the body of the essay. The key is to remind the reader of the main purpose of the essay and wrap up the ideas neatly.

#### ■ Use of counter-arguments to support your own

A well-argued or 'compelling' position is one that takes into consideration alternate positions. Taking a position on an issue means making choices, and the argument is an attempt to justify one position over another.

To strengthen your own position you can indicate what other options were available to you and why you didn't choose them. This shows your examiner both that you understand other positions and that you understand your own position's strengths over those other positions.

### A good introductory paragraph will likely include ...

- An indication of why the title is important (a motive for the title).
- An indication of how the writer is interpreting the title.
- The primary thesis or point of discussion which will be the essay's outcome.
- A *brief* summary of main reasons to accept the final outcome (a *brief* summary of your premises or main premise).
- An indication of how the essay will go about answering the title.
- Only things directly relevant to what you have actually written in the body of the essay.

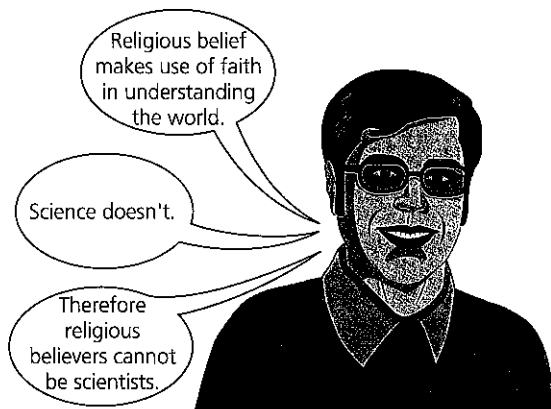
### A good concluding paragraph will likely include ...

- A summary of the main points and the thesis.
- Some indication of why the analysis you have offered is *important* to the title (if you have not done so in the body).
- Some indication (when appropriate) of unanswered questions, or where the argument might go from here.
- Only things directly relevant to what you have actually written.

However, there are two important points regarding the effective use of counter-arguments to strengthen your own position:

- 1 You must offer the counter-argument in the strongest light possible. To do otherwise is to commit 'the straw man fallacy' where you offer a weak and obviously false position and say that your position is better.

Suppose, for example, you are arguing that knowledge about the origins of the universe is best explained using something like the scientific method. If you offer a counter-argument which argues that religious people never believe this because they only use religious scriptures to tell them about the physical origins of the universe, then you are not offering the strongest position because it is simply not true. There is a huge variety of religious perspectives on the origins of the universe and many of them are perfectly happy with the explanations provided by the scientific method. If you characterise the religious perspective in this weak light, the examiner will know immediately that you are not actually strengthening your own argument and will start thinking that your own understanding of the key issues and your abilities to develop a good argument around them are seriously flawed.



- 2 Once you have developed a strong version of a position counter to your own, you should engage with it. You don't want the counter-position to be left unchallenged.

If you have a choice between, say, a Keynesian approach to economics and a neoclassical approach, and you choose the neoclassical approach, then you should explain why you have *not* chosen the Keynesian approach. Yes, you get points for pointing out that there are alternatives, and *more* points for genuine evaluation of that alternative.

This is precisely why identifying strengths and weaknesses of a position is *not* genuine evaluation. Mere description would say, 'Here are two perspectives on this view.' Genuine evaluation, however, would say, 'This is an alternative position to mine that I might have chosen and it's a position which has good reasons to believe in it, *but* I'm sticking with my position because mine is better for these reasons.' An examiner might not ultimately agree with you in this choice, but explaining why you like your position and why you think it's better than others is good evaluation.

### ■ General ideas and suggestions for the essay

When things go well for students writing TOK essays they generally go well in similar directions. While the individual student's own ideas and unique perspectives count for a lot, there are a number of things that good essays have in common. I would recommend reading the 'TOK Subject Reports' available from your teachers as a source of ideas and suggestions for what to do and what to avoid. These reports are written after the examinations and they are the examiners' opportunity to feed back their thoughts to the TOK world. They are an excellent source of information. What follows is partly a summary of suggestions found in the reports.

### ■ Clear introduction

I have already mentioned the importance of good introductory and concluding paragraphs. To reiterate, after reading a good introduction your reader should have a very good idea of exactly how you are going to continue. This would include knowing how you are interpreting the title, the sorts of second-order knowledge questions you think are relevant in responding to it and the general approach you are going to take.

### ■ Good examples and their proper analysis

Examples are a crucial element to a good TOK analysis, whether in the essay or the presentation. They help illustrate the points you are trying to make and have the overall effect of creating stronger and more convincing evaluations. Examples, properly analysed, are an essential aspect of the assessment criteria and will help convince your examiner to raise your mark into the higher levels.

However, examples which are 'too easy' or not analysed demonstrate very little analytical skill and examiners see the same examples used again and again. The reason students (and their teachers) are using them is because they, in fact, are good examples for the TOK points they are trying to make, but the problem comes when they don't use them properly in the essay as a support for a larger claim about knowledge. Often students use certain examples as shorthand for larger points; rather than offering a proper analysis, they will just throw out a reference to something and hope that the examiner understands the allusion and makes the links for themselves.

### ■ Proper use of examples

What does it mean to use an example well? When students use examples well, they generally do the following:

- **There is a very clear knowledge claim that the example is meant to illustrate.** Examples are only examples if they illustrate some abstract point – in this case the point needs to be *about knowledge*. The example is both to *illustrate* the claim and also *offer support* for the claim (this is why it needs to be real and not made up).
- **The examples are well explained.** This means taking the time to explain the details of the example, but not spending too much time. It is not necessary to detail every small element of the situation or example; the only parts that need detail are the parts that are needed to help make the point about knowledge that you are working to support.
- **The examples use genuine events or concrete things in the world and are not speculative or hypothetical.** The thing with made-up examples is that they are generally made up in such a way to support *whatever* point the writer is making. No one ever makes up an example which runs counter to their point.

The most common examples of this are when students conjure up some knower from a culture about which they know very little and claim that that knower will have an entirely different perspective on some point about knowledge. The go-to favourite is some knower with a different perspective on history: 'If someone from [some other culture] wrote a history about [some event] they would have an entirely different perspective.'

While this sounds plausible (and indeed might even be true to an extent) it does not constitute genuine evidence: to be evidence, a claim has to be genuine, otherwise it only uncovers intuitions and guesses. A far more effective approach would be to actually find two accounts of some historical event and explore how the approaches are related to that historian's culture.

- **The example is well linked to the TOK point.** An example works best when it is clear why the writer thinks that it is an example of the point; in other words, the student has offered a clear answer to the question: 'Why is this an example?'  
A student might claim that paradigms shift in the natural sciences, then add: 'for example, Einstein'. Examiners are all experienced TOK teachers and will certainly understand what the student is alluding to, but the idea is for the student to do the work, not the examiner. We know why Einstein offers a plausible example, but do you? A better approach would be to explain the notion of paradigm shifts within the context of a sophisticated explanation of how new evidence and mathematical modelling was making it difficult to use traditional Newtonian physics to explain new phenomena.
- **The examples are not repetitive.** Too often the same abstract point (see above) is given too many examples. It is a waste of words or time to over-illustrate a point and if you want to use more than one example for any point, you might want to vary your examples so that you are highlighting a different aspect of the same knowledge claim. If you don't need more than one example, don't waste the time.

**TASK**

- 10 Go through a printed version of your essay or presentation and use a highlighter to indicate all the examples you use and analyse them along the following lines:
- Are there enough of them? Are there too many of them?
  - Are you clear what general point about knowledge you are trying to make?
  - Is the example a real-life concrete event in the world?
  - Is the example speculative or hypothetical?
  - Have you described it well?
  - Have you then explained why you think it is an example of the point about knowledge you are trying to make?
  - Are you using too many examples for the same point?

■ **An analysis of common examples**

There are a number of common examples that are often very poorly used in essays. Sometimes they are appropriate and well used, but too often it's the opposite. I offer a quick discussion of three favourites below, both to suggest that you might do well to avoid them altogether and to give you a sense of how one might meaningfully use them.

**IN PRACTICE – BOX 1****Galileo and the Church**

It is certainly true that there was some tension between Galileo's claim that the Sun stood at the centre of the solar system and the Church's official stance that it was the Earth at the centre of the universe. In reality, however, the main battle lines are more blurred. Hannah Arendt in *The Human Condition* (1958) points out that the theoretical belief of heliocentrism was not new to the Church, which was happy to accept different interpretations of the cosmos: there were many of them at the time. According to Arendt, it was the empirical methods that Galileo proposed (that is, using the newly developed telescope) to find out which theories were real that was the larger threat, as this promoted sense perception as the primary authority in the creation of knowledge.

Whatever the case, the story is far more complicated than that of an authoritarian and conservative Church versus a radical free thinker. 'The Galileo Affair' is an excellent vehicle through which to explore the flourishing use of empirical observation in science, and the role of tradition, culture and technology in the construction of knowledge. But, if you are tempted to simply mention it in support of a claim such as, 'Science and faith are in conflict', then you are mistaken. First, it's simply too broad to be correct, and second you are making far too naive an assumption – neither one of which will convince an examiner that you are doing TOK well.

For further discussion see, for example:

[www.catholic.com/tracts/the-galileo-controversy](http://www.catholic.com/tracts/the-galileo-controversy)

**IN PRACTICE – BOX 2****'People used to believe the Earth was flat'**

This is the go-to example for a number of plausible TOK points, ranging from the ways our scientific understanding of the world evolves over time, to the role of sense perception in our knowledge. The basic premise, however, that people actually did think the Earth was flat is, again, too broadly stated to have genuine critical bite.

As a matter of fact, most educated people have accepted a spherical Earth since Eratosthenes of Cyrene

measured it in the third century BCE, though Plato taught this in his *Phaedo* a hundred or so years earlier. The various ways in which the circumference of the Earth has been calculated is itself a fascinating study of the historical development of geometry. Far from thinking the Earth was flat, Christopher Columbus some 1,600 years later wanted to get to India in the East – and he did so by sailing West; this only works on a sphere. Indeed, Magellan in the sixteenth century actually sailed around the whole thing!

So, yes, while it is true that some people during the last 2,400 years might have thought the Earth was flat, they certainly do not represent the accepted scientific view of the world. This interplay between scientific and 'colloquial' understandings of the world might be an interesting avenue for discussion on its own!

For further information see, for example:

[www.astro.cornell.edu/academics/courses/astro201/eratosthenes.htm](http://www.astro.cornell.edu/academics/courses/astro201/eratosthenes.htm)

[www.britannica.com/EBchecked/topic/191064/Eratosthenes-of-Cyrene](http://www.britannica.com/EBchecked/topic/191064/Eratosthenes-of-Cyrene)

[http://oceanservice.noaa.gov/education/kits/geodesy/geo02\\_histr.html](http://oceanservice.noaa.gov/education/kits/geodesy/geo02_histr.html)

### IN PRACTICE – BOX 3

#### **Yes, the Nazis were unkind**

In a 2003 article for *Wired* magazine, Mike Godwin offered what he called *Godwin's Law of Nazi Analogies*: 'As an online discussion grows longer, the probability of a comparison involving Nazis or Hitler approaches one.' Meaning that at some point any ethical debate results in the mention of the Nazis.

My suggestion is that if Godwin's Law is true (that all internet debates result in a Nazi analogy), then TOK students would do well to avoid using the example because they are all too common. From propaganda, medical experiments and poor military strategy, all the way to disgusting racial theories, the Nazis are held up as history's bad guys. Granted, the Nazis had all sorts of offensive beliefs and engaged in a number of immoral activities, but just identifying this is not critical thought because we already know it.

If you are going to discuss propaganda, why not check the nightly news and see what the political parties near you are up to? What about certain medical experiments? Perhaps it would be more surprising and interesting to explore how the US Department of Public Health's Tuskegee Study / Experiment, 1932–1972, in Alabama treated its test subjects in the name of science? Are you exploring questionable scientific beliefs about racial inferiority? Do some reading on the growth of the early Eugenics movement at Cold Harbor Springs in New York State, USA, or explore the role of cultural beliefs in modern stem cell research.

For further information, see for example:

[http://en.wikipedia.org/wiki/Godwin's\\_Law](http://en.wikipedia.org/wiki/Godwin's_Law)

Again, I offer these three examples, not as a general prohibition against using them; each of these can be a fantastic example of TOK principles. I only suggest that using them without making them into good examples will, because they are so common, only highlight any of their inadequacies.

#### ■ Use of knowledge questions

In the assessment criteria for the essay there is a reference to knowledge questions: for Level 5 it states:

'There is a sustained focus on the knowledge questions connected to the prescribed title.'

What this means for the student is that throughout the essay relevance must be maintained. Many TOK students use the essay as an opportunity to discuss all sorts of really interesting TOK ideas, many of them quite sophisticated which include compelling examples and analysis, but, sadly, are irrelevant to the title. This is a serious worry, since when the examiner believes the essay to be irrelevant to the prescribed title, the student runs the risk of getting zero for the whole thing.

This element of the assessment criteria, then, is a way to reward those students who have remained closely relevant to the title throughout the essay, making sure to clearly identify why each point is helpful in the overall analysis of the title. The knowledge questions here serve as elements of the wider analysis, not end-points on their own.

**TOK TRAP**

In many cases, students will conclude their introductory paragraph with a handful of knowledge questions, saying something like, 'My analysis of the prescribed title led me to identify the following knowledge questions', followed by a list of questions (sometimes even in bold!). When the student becomes focused on those knowledge questions at the expense of the prescribed title itself, problems of relevance may arise.

Whatever knowledge questions you raise *need to be relevant to your analysis of the title*. If the examiner believes that you have developed an analysis that is not relevant to the title (though it might be good TOK and relevant to the knowledge questions you identified), you run the risk of being given zero for the essay.

### ■ Knowledge questions do not need to be explicitly identified

Knowledge questions do not need to be explicitly identified. In many successful essays they are, but they are always explicitly related to the prescribed title. The examiner must know the answer to the question, 'Why is this knowledge question essential to the analysis of the prescribed title?'

If you don't know or can't make it clear, the examiner will begin to wonder about the relevance of your essay. These are ideas you should be working out during the planning stages and before you start presenting your argument. Some successful students don't necessarily state knowledge questions explicitly, but use them in planning to identify the underlying issues within the prescribed title, and use them in deciding how to present their ideas. The essay might use the ideas raised by asking the questions to answer the title, without ever identifying the knowledge questions themselves. The point is simply to guarantee that your discussion is always relevant to the prescribed title in a way that is clear and useful.

### ■ Use of WOKs

The assessment criteria suggest that your perspectives should be 'effectively linked to areas of knowledge and / or ways of knowing'.

This means that you don't have to talk specifically about WOKs or AOKs, but you can limit your analysis to some. This should be part of the first phase of your thinking – try using the WOK and AOK to develop your ideas, but remember that you are not going to have to go through all of them. Combined there are sixteen of them! When using AOKs and WOKs there are some things to keep in mind:

### ■ Avoid lists

One of the biggest pitfalls you can easily avoid in a TOK essay is 'The List'. When a student says, 'I will now explore the eight ways of knowing / areas of knowledge' most examiners will sigh deeply, rub their eyes and reach for the coffee, knowing that what follows will be a very long explanation of all the student's ideas about the WOK or AOK.

The TOK essay is actually not a very long essay, so trying to say anything about each of the WOKs or AOKs will result in a very superficial analysis. This is where the distinction between description, analysis and evaluation is most important. If you are trying to do too much in your essay, you will invariably end up only describing your ideas on the material rather than developing a compelling analysis or evaluation.

The secret here is to choose your AOKs or WOKs wisely, identifying a range of material which allows you to say something interesting about each of them. Don't choose more than one AOK or WOK to make the same point. Part of the first phase of thinking needs to