An introduction to Theory of Knowledge

What is Theory of Knowledge and why does it matter?

Imagine a group of idealistic men and women from several countries sitting around a table back in the sixties asking, What should our young people know and be able to do by the time they leave school? That’s like asking, Why do we go to school?

Now imagine you had a blank slate and could design your own course of school studies the way you can after you leave and move on to college and university. Would you include Theory of Knowledge (TOK)? Before you could give an intelligent answer, you would have to know what it is, and what value it holds for you and for others.

It should be no surprise that the IB was born against the backdrop of the tumultuous sixties. And even though educational debates might lack the drama of the other movements of that era, there were radical notions at play in those early IB meetings. After all, these visionary pioneers were turning their backs on their own country’s school systems in favour of a programme of international awareness, even compassion, linked to the highest academic rigour and recognized by the best institutions of higher learning around the world.

But first the reformers needed a curriculum and a testing system independent of any particular culture. The initial choices were easy. A mother tongue and a second language were obvious for an international diploma and they quickly agreed on the need for science and maths requirements; then at least one of several humanities or social science courses; and, finally, the arts were the finishing touch of the hexagon that later became their logo. And to make the IB a distinctive programme, and not just a collection of courses, as was the case with the British A’ and O’ levels and the American Advanced Placements courses, the Extended Essay and CAS were added. Yet, to bring it all together, it was also crucial that there should be one academic course, a keystone course that unified the IB diploma. But what should it be?

International agreements are not easy to reach. This reality emerged with the French insisting that every student should take philosophy and the British strongly vetoing the idea. The quarrel was protracted but both sides at last seized upon the idea that every student should follow a course, not in philosophy as such by mastering the great books, but in philosophical thinking based on the students’ education to date. Thus, What is science? What is art? What is good evidence? Is there such a thing as an ethical fact? When do your feelings count as knowledge? are typical TOK questions. So TOK became the great compromise and the basic design of the IB diploma was complete.

Today, TOK is hailed as the unique feature of the IB programme. It is widely emulated by national schools for the quality of thought that it generates about the purpose, methodology and proofs of each discipline or field of study.

With TOK it was hoped that each IB diploma holder would not only gain a thoughtful awareness of the knowledge they had so far acquired in school, plus the way knowledge ‘works in the world’, but also the grounds for their personal belief systems. And that
they would come to realize that this knowledge, which seems so certain and final in their textbooks, and is imparted with almost gospel credibility in the classroom, is the answer to questions someone once asked in curiosity, wonder or doubt.

Alec Peterson, Godfather of TOK, one of the founding fathers of the IB, its first Director General and himself a TOK teacher, stated that the aim of the course was to counteract two weaknesses which were seen in most upper secondary schools:

1. **The failure to make explicit in the minds of students the different forms which academic learning and knowledge take.** What matters is not the absorption and regurgitation of facts but the development of powers of the mind or ways of thinking which can be applied to new situations and new facts as they arise.

2. **The tendency for students to study their different subjects in watertight compartments.** In doing so, they fail to be able to relate science and art to one another, or to make connections between literature and history. The ability to see how different specialized approaches to a single problem can occur is very important.

In short, the definition of an educated person within the IB was someone who knew how to apply knowledge to novel situations for which there were no ready-made answers.

In Peterson’s words

> Within the IB, the nature of the TOK course is to encourage reflection upon what the student has learned both inside and outside the classroom. For even a broad and intensive curriculum can be studied as though the subjects were in watertight compartments and unrelated to ordinary experience. No matter how good the curriculum is in its parts, we have not done fully right by our students if we deny them the chance to make an integrated sense of their high school life and the virtues and limitations of their learning, and to bring it to critical light. TOK makes a start in this direction.


TOK is a thoughtful reflection on what students claim to know and believe and what others profess as knowledge.

Critical thinking does not mean finding fault. The spirit of inquiry is meant to bring about more appreciative ways of looking at the subject areas around the IB hexagon.

The teaching may be different from that found in other subjects, since the memorization model of learning is replaced by the question and discussion model.

There may not be one right answer to a question but there are standards for judgement in the expression and defence of beliefs and knowledge claims. And some reasons may be better than others.
Assessment is based on an externally marked essay written on one of ten Prescribed Topics (PTs), plus an internally assessed presentation to the class on 'knowledge at work in the world'.

### Exercise

Based on what you have read so far, role play with others a 30-second ‘sound bite’ in which you respond to someone in a university admissions office or a summer job interview asking you, ‘What is TOK, anyway?’

I expect you all to be independent, innovative, critical thinkers who will do exactly as I say.

All the parts of this course radiate out from the central question, What is knowledge? While nowhere in the syllabus do we consider this question on its own, we shall in the next chapter. We talk about Ways of Knowing where knowledge is linked to Reason,
Emotion, Perception and Language and Areas of Knowledge where knowledge is already organized into maths, natural sciences, human sciences, history, ethics and the arts. Students tend to talk about these Areas of Knowledge as subjects or courses in secondary school but elsewhere, especially in universities, they are described as disciplines or fields of study each with its own:

- definition
- way of thinking
- set of problems
- object of study
- vocabulary
- methods
- proofs
- experts.

It is crucial to your success in TOK that you understand what a discipline means, since the course is organized, in large part, around the Areas of Knowledge, in other words, disciplines. In order to get a feel for what a discipline is in the real world, it is good to know that real people make their living as scholars within these fields of study and in that sense they are dynamic, not just collections of knowledge. In fact, as in any social group, there are leaders and followers and cliques all performing their scholarly work according to certain written and unwritten rules, acquiring knowledge, explaining it and defending it (because disputes within a discipline are endless). While there is always a body of knowledge that is accepted within any discipline, there are also people working at the cutting edge of research, thinking new thoughts and debating the issues of the day and publishing their work in the magazines or periodicals associated with each field of study.

So it is not surprising that some people get prizes, money and fame and some do not. Some work in the trenches of everyday activity, while others make the discoveries and breakthroughs. Some are in and some are out, some are lucky, some are not. Some get to ask the questions and give the answers and others have to fall in line. Yet, at the same time, all scholars and practitioners use questions, doubts, theories, facts, imagination, intuition, reason, passion, patience, evidence and intellectual honesty as they try to make sense of the world and tell us about it.
Exercise

Match each discipline with the following simple identifiers. (Note the simplicity of the list. In the real world, there are many hyphenated or overlapping disciplines such as astro-physics, bio-chemistry, art history, cognitive psychology, political anthropology, ethics of science etc.)

______ Logic a) numerical relationships
______ Economics b) judgements of right and wrong
______ History c) valid reasoning
e) lawful events in the natural world
______ Ethics d) past events
______ Aesthetics e) lawful events in the natural world
______ Maths f) behaviour of people and animals
g) events in the social world
______ Science h) power and policy
______ Psychology i) judgements of beauty
______ Politics i) judgements of beauty
______ Social sciences j) distribution of material goods and services

A good presentation topic is to consider what the cutting edge issue of the day is for each discipline and who are the leaders in any particular field, and why.

What’s in a name?

Have you ever wondered why the course is called Theory of Knowledge? Other names that have been suggested for the course include:

- Forms of Knowledge
- Maps of Knowledge
- Realms of Knowledge
- Problems of Knowledge
- Knowledge Issues
- Ways of Understanding.

You should note that the name ‘Theory of Knowledge’ is not meant to imply that there is only one theory about knowledge. Theory comes from the Greek word for theatre as a way of seeing something, so ‘Looking at Knowledge’ might be an equivalent for ‘Theory of Knowledge’. What other names might you suggest? Pathways to Knowledge? What does each variation emphasize?

But more importantly than what TOK is are the habits of mind that are formed in the student from the experience of honest critical thought. After all, it is the student who is at the centre of the TOK diagram as the knower. And it is the mission of the IB that all of its diploma students will acquire the intellectual honesty and powers of judgement which are characteristic of the thinking student and that these characteristics will be emblematic of the IB education. (See the Learner Profile on page xx to match your idea of what it means to be educated with what the IB has proposed.)

What do you think of one teacher’s description of her TOK students on their
Students come to us at the beginning of the year who have studied something of great human significance in art, literature, the sciences, maths and history – all the hexagon subjects. Experience is then deepened with the exposure to new, challenging and relevant ideas from other disciplines, other groups or a voice not earlier heard. They internalize a feeling for more than one way of seeing the world. They find their voices in discussion with others. They know the limitations of any single voice. They are immersed in a community of intercultural and interdisciplinary thought. They have begun to master the skills of integrating these diverse perspectives because they know what counts as a good question and the beginning of a good answer. And they know that a question can be asked with admiration and awe as well as from challenge and confrontation. They are comfortable with ambiguity and prepared to live in a world of uncertainty. They sense when action or restraint in judgement is called for; they are comfortable in disagreement and poised in conflict. This is a splendid portrait of a young person with empathy, with openness to growth, glad for the stimulation of new ideas, and with an appreciation of differences as a treasure house. All of this has become part of their instinctive responses to novel situations. They are ready to take the next step. They are ready to graduate.

Exercise

Compare the personal view given above with the more textbook version of a critical thinker versus a non-critical thinker shown below. Both have value. Which do you prefer?

Critical thinker
- They are honest with themselves and recognize what they do not know.
- They regard problems and controversial issues as exciting challenges.
- They strive for understanding, keep curiosity alive, remain patient with complexity and invest time to overcome confusion.
- They set aside personal preferences and base judgements on evidence.

Non-critical thinker
- They pretend they know more than they do, ignore their limitations, and assume their views are error-free.
- They regard problems and controversial issues as nuisances or threats to their ego.
- They are impatient with complexity and would rather remain confused than make the effort to understand.
- They base judgements on first impressions and gut reactions. They are unconcerned about evidence and cling to their own ideas in the face of a challenge.

Knowledge profile

Who are you?

Man is made by his beliefs. As he believes, so he is.

Bhagavad Gita 500 BC

You are very likely to ask yourself more than once in your life, Who am I? What do I believe? What do I want to do? What do I need to know in order to do it? Self knowledge, as such, is not taught in school even though we come to know ourselves
better through the way we react to the experience of learning both in and out of the
classroom. Before delving into the Ways of Knowing which we’ll explore in Chapter 3,
it is good to recall the words of Socrates, ‘Know thyself’.

Exercise

One wise man said, ‘If you want to know someone, you have to know their memories.’ Another person said, ‘If you want to know someone, find out what they love, find out what they hate.’ Does this mean that you are your memories? Does this mean you are what you hate? Consider:

- You are what you know.
- You are what you believe.
- You are what you do.
- You are what you hope for.
- You are what you feel.
- You are how you think.

How true is any of this? Is the list complete? What would you add? What are the differences? What difference does it make in your life to believe or not believe something? How might it make you a different person?

Don’t tell me what you believe in. I’ll observe how you behave and I will make my own determination.

Alex Trebek

Note how your actions are affected by your belief that:

- No one is watching you.
- It is going to rain.
- Your chair is broken.
- You are invisible.
- Your father is mad at you.
- Your opinions are worth nothing.
- You are weightless.
- You are good-looking.
- You can dance.
- You can’t dance.
- Nobody likes you.
- Everybody likes you.
- You are smart.
- You are not smart.
- The world will end tomorrow.
- God is watching you every minute.

Another distinction among people is the way they go about finding out what they need to know. In the US the state motto for Missouri is the ‘show-me’ state meaning that people there are reluctant to believe anything that they don’t see with their own eyes. In short, seeing is believing.

Consider the story below which is about a husband and wife as an example of two different kinds of ‘knowers’. In philosophical terms, one is the empirical and the other is the rational; in simpler terms, one relies on observation and experience while the other relies on logic and reasoning.
Once upon a time there was a woman who thought she heard a burglar downstairs. She woke up her husband…

Woman: *Honey, I think someone is in the house. Please go and look.*

Man: *There's no one in the house. If someone were in the house the alarm would have gone off. Go back to sleep.*

Woman: *Maybe someone cut the wires.*

Man: *Don't be silly. The dog would have barked.*

Woman: *Maybe they chloroformed the dog. Please go look for me.*

So down he went, and looked around, then came back up…

Man: *There, I've looked. No one is in the house.*

Woman: *Well, did you look everywhere?*

Man: *Yes.*

Woman: *Did you look in the kitchen?*

Man: *Yes.*

Woman: *Well, maybe when you were in the kitchen, he was in the living room.*

And so on…

The message of the story is that one kind of person, by and large, figures things out in his head and reaches a conclusion, a very satisfactory one for him. If there were a burglar, the dog would have barked; the dog did not bark, therefore there is no burglar. This is a very neat *syllogism* or piece of logic. In contrast, the wife cannot accept the first premise because she depends upon the *seeing is believing* kind of evidence. For every reason the husband gives, the wife will find a doubt. For every possibility the wife gives, the husband will find it inconceivable. While no one is purely only one kind of knower, or uses only one kind of approach, these two tendencies, *going and looking* versus *sitting and thinking* characterize some of our own ways of forming our beliefs, becoming certain of our opinions or even changing our minds upon occasion.

**Two approaches to belief**

The following do not all mean the same but each column belongs to a family of meaning.

<table>
<thead>
<tr>
<th>Rational</th>
<th>Empirical</th>
</tr>
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<tbody>
<tr>
<td>Logic</td>
<td>Experience</td>
</tr>
<tr>
<td>Reasoning</td>
<td>Observation</td>
</tr>
<tr>
<td>Sitting and thinking</td>
<td>Going and looking</td>
</tr>
</tbody>
</table>
A Name one thing that you used to believe and now do not.
B Name one thing that you believe now that you think you will believe forever.
For A, ask yourself:
• What made you believe it in the first place?
• Was the belief rational or empirical or both or neither?
• How did you come to change your belief?
• How strong was the belief?
• How important was the belief?
• What might occur to make you believe it again?
• What difference would it make in your life if this belief turned out to be true?

For B, ask yourself:
• What makes you believe it in the first place?
• Is the belief rational or empirical or both or neither?
• Could anything make you change your mind?
• Would it be rational or empirical or both or neither?
• How strong or important is the belief?
• How many other people believe the same thing?
• What difference would it make in your life if this belief turned out not to be true?

Some of the beliefs you might have mentioned could have powerful emotional components to them. For instance, a) it feels good to know something and b) miserable not to know something when you want to or when you have to; (c) to feel awful to lose think they know us, or believe us or trust us. Because we live in a world with others, there is an other-relatedness to what we know and believe and how we talk about it.

**Ideal knower**

**The Buddha (circa 563–483 BCE)**

Buddha was not a prophet, saint or god; he was a wise teacher and even taught his followers to doubt him.

In Buddhism, there are two kinds of faith: preliminary faith (the trust with which we begin) and verified faith (the confirmation of preliminary faith). Here are some of the words of Buddha:

*Do not believe in anything simply because you have heard it.*
*Do not believe in traditions because they have been handed down for many generations.*
*Do not believe in anything because it is spoken and rumoured by many.*
*Do not believe in anything simply because it is found in your religious books.*
*Do not believe in anything merely on the authority of your teachers and elders.*

But after observation and analysis, when you find that anything agrees with reason, and is conducive to the good… then accept it and live up to it.

*O monks, just like examining god in order to know its quality, you should put my words to the test. A wise person does not accept them merely out of respect.*

Shakyamuni Buddha
Student presentation

1 Does it matter if what we believe is true?
Give each person three short articles of varying credibility. They might be:
   a an absurd news article to provoke disbelief such as Elvis on the Moon
   b an article mixing fact and fiction, perhaps treating one cultural group negatively
   c a more dependable article, but which is still interpretive (for example, a passage from a history textbook).

Discuss these questions after reading the articles:
   • Do you believe the article? Why or why not?
   • What is its source? What is its evidence?
   • Does it matter if what you believe is true?
   • What if you believed or rejected the article? What would it justify?

2 Expand on the exercise on page 4 by interviewing your teachers, then presenting the following to the class:
   • What was their major field of study in college or university?
   • What were some supporting disciplines?
   • How are the disciplines described?
   • How was the choice arrived at?
   • What is the history of the disciplines?
   • Who are the major figures?
   • What are the current problems of knowledge or knowledge issues in the various disciplines?

Note: This list can be revised in several ways to suit the situation.

Essay questions

1 We cannot understand what a person means by what he says without knowing a good deal about his beliefs.

2 What beneficial role might doubt play in forming beliefs? Discuss.