# A-ZE Tok

GLOSSARY AND STUDENT COMPANION FOR IB DIPLOMA

Theory of Knowledge

**BIANCA PELLET** 





#### Keyboard warrior

Someone who makes abusive or aggressive posts online, typically a person who hides their true identity.

"This led furious keyboard warriors to take to the internet and post personal abuse about the historian and TV presenter."

How valuable is the anonymity of the internet? To what extent is it ethical or possible to identify users of the internet by their true names and identities?

Knowledge and the knower, Technology

#### KK thesis

The idea that if you know something, you know that you know it.

"The KK thesis implies that the knower has self-knowledge. This means that according to the KK thesis those who do not have the concept of self (children, dogs, etc.) have no knowledge whatsoever."

How far is it possible to have knowledge that we are unaware of? What reasons might there be to accept, or reject, the KK principle? To what extent does the KK principle prove that knowledge is infallible?

#### Human sciences

#### Knower

A person who knows, understands, or perceives ideas and information.

"Humans are agents in the world more fundamentally than they are knowers of the world."

How far is it important to be a 'doer' and how does this compare with the importance of being a knower? To what extent is the relationship between the knower and the known a reciprocal one? How far are our knowledge claims consistent with our best psychological account of ourselves as knowers?

#### (Knowledge and the knower)

#### Knowledge

Facts, information and skills acquired through education and experience; the understanding of the theory and/or practices of a subject.

"She gained thorough knowledge of local customs."

In what ways might our knowledge and our acquisition of it, be limited? How do we decide how to use our knowledge?

#### (Knowledge and the knower)

#### Knowledgeable

If you are knowledgeable, you are able to retain lots of facts and ideas and apply them to different situations. According to the IB **learner profile**, learners are knowledgeable if they are developing and using their understanding, explore knowledge across a range of disciplines, and engage with ideas that are globally important.

How far is it necessary to engage across multiple areas of knowledge in order to be knowledgeable?

#### (Knowledge and the knower)

#### Knowledge claim

A statement that the knower – the person producing or saying the statement – believes to be true, even if that statement is wrong, cannot be checked, or has not been verified yet. An example of a first-order knowledge claim might be "mammals cannot fly"; an example of a second-order knowledge claim might be "mathematical knowledge is always certain".

How could we assess whether or not these knowledge claims are true? How can we rationally criticise a knowledge claim? What makes a knowledge claim valuable?

(Knowledge and the knower)

#### Knowledge framework

Within TOK, a knowledge framework is a list of concepts that should be explored within each area of knowledge. The knowledge framework consists of four elements: ethics, methods and tools, perspectives, and scope.

How do we decide if all of the elements of this knowledge framework are of equal importance? How might each of them improve or limit our search for knowledge? How far might such knowledge frameworks be considered too prescriptive?

#### (Knowledge and the knower)

#### Knowledge gaps

The pieces of information you do not have.

"The knowledge gap hypothesis proposes that gaps in our knowledge are spread out throughout society according to our socio-economic status, meaning that people in wealthier, more highly-educated groups acquire information faster, widening the gap."

To what extent are knowledge, education, and interest interdependent? How far is it possible to close a wider knowledge gap present in a society? To what extent can the internet close or widen knowledge gaps (in individuals and/or larger groups)?

#### Human sciences, Technology

#### Knowledge neglect

Knowledge neglect is when people fail to retrieve and apply previously stored knowledge appropriately into a current situation. (See also **semantic illusion**.)

"This demonstrates what psychologists call knowledge neglect – they have relevant information, and yet fail to use it."

What might the role of knowledge neglect be in the context of misinformation, disinformation, and echo chambers? How can we detect how knowledge neglect occurs?

#### Human sciences

Knowledge question (KQ) A question about the nature of knowledge itself, rather than a question about specific content or situations. (See also first-order knowledge, second-order knowledge.)

"Knowledge questions are open-ended and cannot simply be answered 'yes' or

An example of a knowledge question might be "At what point does a belief become knowledge?" The vast majority of the results on the first five pages of Google results when "knowledge question" is searched for are to do with TOK/this specific epistemology course. What might this tell us about the phrase and its origins? To what extent can it be argued to 'exist' outside of the TOK context?

#### Technology

#### Knowledge system

An organization or structure of knowledge in computer science, an expert system. This could be within a society, culture, company, or even machine.

"By 2040, digitalisation will have transformed science, technology, research, and education into a new integrated knowledge system, with abundant real-time and historic data accessible through AI devices, and education making extensive use of digital tools."

To what extent is defining knowledge systems dependent on the area of knowledge we are working in? How far does information about, and research into, cultural knowledge systems provide us with tools for translating cultural knowledge? What possible roles do knowledge systems play? What might be some of their limitations? How far do knowledge systems enable us to access knowledge?

#### Indigenous knowledge, Technology

#### Knowledge transfer

Sharing and disseminating information; providing input to problem solving.

"Some of the parents found that this knowledge transfer was useful but not sufficient to change their parenting practice."

How far can the perspectives of the knowledge producer and knowledge user be balanced in the process of knowledge transfer? How can the usefulness of knowledge transfers be assessed?

#### (Knowledge and the knower)

#### Kuhn cycle

A cycle model describing how we progress our scientific knowledge, starting with 'normal science' (the foundation for scientific practice), followed by 'model drift' (the appearance of a problem or phenomenon that the existing system can't handle, which can be restored by a solution 'returning' the system to 'normal science'), 'model crisis' (when the problem cannot be solved), 'model revolution' (when new models or systems are created from trying to solve the crisis), and finally, a 'paradigm change' (also called a **paradigm shift**), where the new model of understanding (or paradigm) is taught to newcomers to the field. When accepted, this returns the field to a state of 'normal science', and the Kuhn cycle is thus completed.

"The Kuhn cycle challenged the world's current conception of science, which was that it was a steady progression of the accumulation of new ideas."

How do we know if one day the concept of the Kuhn cycle itself might not be challenged? What might be some possible problems with the Kuhn cycle?

#### Natural sciences

#### Language

Human communication through words, structured in a particular way, and conveyed through speech (including elements such as tone of voice), writing, or gesture (body language).

"He explained the procedure using simple everyday language." "In the context of language usage, over time and under specific conditions, words change (or extend) their meanings."

Who decides when or whether a new word enters our language? How can we establish the possible goals of language? What are some possible intersections between language and other areas of knowledge? To what extent could language be considered the 'main' or 'ultimate' way of knowing? How far does linguistic competence require knowledge of language?

#### Language, Politics

#### Law of excluded middle

The idea that any proposition in the form P vs non-P (ie a pair of statements) is true in one way or another. Any 'middle' possibility has been excluded. Unlike bivalence, it is mainly to do with how the idea of truth or 'not-truth' is structured, as opposed to the actual 'meaning' of truth. (See also bivalence, law of identity, law of non-contradiction.)

For example, "Schiphol is bald" implies the opposite proposition, "Schiphol is not bald". "One law of excluded middle for natural numbers is: Given any natural number, either it is even or it's not even."

According to the law of excluded middle, one of these has to be true. What could be some problems with this way of thinking?

#### **Mathematics**

#### Law of identity

The idea that everything in existence has a specific nature. Each entity exists as something in particular and it has characteristics that are a part of what it is. This can be formally expressed as A = A.

"This leaf is red, solid, dry, rough, and flammable." "This book is white, and has 312 pages." "This coin is round, dense, smooth, and has a picture on it."

How far does the law of identity mean that we have only one identity? To what extent is one object different to others of the same type (eg a particular species of hamster)? To what extent does reality have a definite nature?

#### (Knowledge and the knower)

#### Law of noncontradiction

The idea that two statements with opposite meanings cannot both be true at the same time.

"She is still the acting chief of police while having been demoted from the position, and tries to investigate a man that both was and was not her stepfather." "The square sweets looked round."

How can we determine whether or not the law of non-contradiction has been broken? How can we decide whether this law of thought is valid in general?

#### (Knowledge and the knower)

#### Leading question

A question phrased in such a way that it suggests what the answer should be, or encourages the answer that the questioner wants to hear; the phrasing of a leading question can also make the interviewee look guilty of something even if they have not done it.

A question such as "You were there last night, weren't you?" is a leading question, whereas "Were you there last night?" is not.

How do we know if leading questions have been used? What are some possible ethical implications of using leading questions, particularly from a legal or scientific perspective?

#### **Human sciences**

#### Legend

A traditional story, often regarded as historical, but usually not authenticated or verified as true.

"In this story, legend and truth are often inextricable."

Why do legends arise? Is it possible or desirable to authenticate them, and for what reasons? How do we judge their value? To what extent is our society based on myth and legend? How far does it matter whether we believe in a particular legend as being true or not?

#### The arts, History, Language

#### Legitimate

Conforming to the law or rules; logically valid.

"She had a legitimate excuse for being late." "His birth was recorded as illegitimate, according to the laws of that time, since his parents weren't married." "The document was deemed legitimate."

Who defines the idea of legitimacy, and how? In what ways might legal and societal legitimacy differ? How do we decide if something is legitimate or not? How might ideas of what is legitimate change over time?

History

Lens

A critical viewpoint through which an argument is analysed, influencing the ways in which we perceive, understand, and evaluate the ideas involved.

"The changes identified in the 1960s are viewed through different historical lenses." "The book certainly deals with that argument, but tackles it through a post-colonial lens."

What are some possible benefits and pitfalls to viewing a text through a particular critical lens? How may this approach refine or limit our search for knowledge?

The arts, Language, History, Politics

Liar's paradox

When a liar states that he/she is lying.

If a known liar says "I am lying", then we take this to be the truth; however, if they lie about everything, then they are lying about lying.

Are there any possible resolutions to the liar's paradox? How do we know? How far is it possible for the liar's paradox to exist in some languages but not others?

Language

Limitations

A restriction; a defect or failing; a limiting rule or circumstance.

"She knew her limitations better than she knew her worth."

How do we know what our own limitations are? How do we assess the limitations that exist in some of the research methods that we use (such as case studies, questionnaires, and interviews)? In our search for knowledge, how do we know whether the limitations are present in the areas of knowledge, or in our ways of knowing, or both?

(Knowledge and the knower)

Linear

Progressing in a logical sequence; arranged or extending along a straight (or nearly straight) line.

"A linear displacement of the rib space will therefore not produce a linear displacement of muscle fibres." "We could cautiously conclude that a linear relationship exists between jet fuel cost and flight cost."

What methods can we use to help establish whether or not a linear relationship exists between two factors? To what extent is progress linear? If progress is not linear, how can we judge whether or not someone or something is improving?

Mathematics

Link

A relationship or connection between two things, people, or ideas. (See also causation, correlation.)

"They have been commissioned to investigate possible links between pollution and forest decline."

How can we establish whether a link between two things or ideas really exists? How do we know if it is in someone's interest to emphasise or downplay a real link that exists between two things or ideas?

(Knowledge and the knower)

Lip service

When you 'pay lip service' to something or to an idea, it means that what you say does not match up with what you actually do.

"Some may pay lip service to religion because it advantages them to do so." "It is all too easy to pay lip service to human rights."

How do we know if somebody is genuinely involved or sincere, or just paying lip service to an idea? What are some possible ethical implications of only paying lip service to an idea?

Knowledge and the knower

#### Literacy

Basic reading and writing skills; competence or knowledge in a certain area.

"Computer literacy is essential." "The programme is intended to promote adult literacy among people who have had very little schooling."

How do we know whether somebody is literate? To what extent can literacy be judged merely through the correct use of spelling and grammar? How can we work out what causes literacy problems? How far are literacy and epistemology separate? Why might digital or media literacy, in particular, be important to our study of epistemology?

#### Language, Technology

Literal

Basic or usual; without metaphor, exaggeration, or hidden meaning. In translation, the exact words of the original text, rather than just the general sense of them.

"He took my instructions rather too literally." "Beyond the green light's literal function, it has a symbolic meaning throughout the text." "Just because one sentence can be translated literally across languages does not mean that all sentences can be translated literally."

How do we know if we have taken something too literally? How can we detect whether a writer has only used a literal meaning, or whether they have gone beyond this to add other layers of meaning? What are some possible advantages and disadvantages of literal, or word-for-word, translation?

#### The arts, Language

Locus

A place where something occurs or is situated.

"The real locus of power is in the local council."

How can we determine the locus of something? To what extent is epistemology/TOK itself the locus of competence?

(Knowledge and the knower)

Logic

The use of sound reasoning to reach a conclusion; the rules and processes used to achieve this.

"Since she helped us before, it seems logical that she would help us again." "The engineering toys teach kids to use logical and problem-solving skills to figure out how the cogs make the machines move."

What are some possible strengths and weaknesses of logic as a way of knowing? To what extent can knowledge be accessed through a 'step-by-step', logical approach? How far is the human mind set up for rational thought? How does logic interact with other ways of knowing? Might there be situations in which information logically follows from a premise, but is still wrong?

(Knowledge and the knower)

Logical positivism

The idea that scientific knowledge is the only type of factual knowledge; or a viewpoint committed to verification (the ability to check facts).

"Logical positivism is sometimes stereotyped as forbidding talk of things we can't observe, but that is an exaggeration."

How far does logical positivism help us to advance our knowledge? How far is it possible to 'prove' something? To what extent can the idea of logical positivism itself be proved? How far does logical positivism allow for some forms of proof to be stronger than others? How can we establish what makes a form or area of knowledge 'unobservable' or 'unverifiable'? To what extent does every area of knowledge contain 'unobservables'?

(Knowledge and the knower)

Logos

Arguments based on reason, facts, and statistics, as opposed to emotions or the speaker's moral credibility. (See also **ethos**, **pathos**.)

"Logos often depends on the use of inductive or deductive reasoning; for example, the idea that fair trade agreements worked for one farmer, so might also work for others."

How can we judge the effectiveness of logos as a tool of persuasion, especially relative to the impact of pathos or ethos? How do we know whether a speaker has provided complete and accurate information about an issue? To what extent can data fully support our claims?

Human sciences, Language, Mathematics, Natural sciences, Politics

When a small mistake in the law or a set of rules allows people to misbehave or act illegally or wrongly.

"Although establishing new schools is not permitted, there is always a loophole that can be exploited."

How far can technology and legal mechanisms close all existing loopholes in sets of rules and laws? What are some possible ethical implications of loopholes?

Knowledge and the knower

Clear; easy to understand. In order to gain full marks for your TOK **essay** and **exhibition**, one of the things they have to be is lucid.

How do we know whether we are expressing our arguments lucidly or not? What methods could we use to check if this is the case or not? In lucid dreams, the dreamer becomes aware that they are dreaming; how far are their perceptions of the dream reliable?

Human sciences

Mistaking the kind of uncertainty found in games for the same type of uncertainty experienced in real life.

An example of a ludic fallacy would be treating gambling on the stock market like a game with clearly defined rules and algorithms (like in a casino), whereas the real risk exists outside our spreadsheets and gamification of the process – in the real world where nobody knows the rules and you don't know which variables contribute to which result.

How far can we calculate odds in relation to real-life situations? For what reasons might the ludic fallacy be damaging? How can we judge the usefulness of simplified versions of real-world phenomena?

Human sciences, Mathematics

Loophole

Lucid

Ludic fallacy

# Internal assessment: the TOK exhibition

### Preparing your TOK exhibition: FAQ

#### What is the exhibition, and how do I decide what subject to base it on?

In the TOK exhibition, you need to show three examples of how TOK exists in the world around us.

This exhibition is like an art exhibition, but with examples of objects which show knowledge processes – how we question and develop knowledge – in the real world. Your exhibition should be based on one of the 35 IA prompts published by the IBO. Your teacher will provide you with these. All three objects therefore need to link to this same prompt.

#### Get it right!

The IA prompt that you choose must also be used exactly as it is written in the IB guide – the wording cannot be changed in any way.

It is also strongly recommended by the IB that you base your exhibition on *at least one* of the TOK **themes** studied in class. So for example, don't do your exhibition on an IA prompt relating to indigenous societies if this has not been studied.

Remember all these themes can be reviewed in the glossary in this book.

#### What is an object? What type of thing can I include?

Objects could consist of any of the following:

- Pieces of art
- Video clips
- News articles
- Photographs
- A text created by you (eg your extended essay!) or someone else (eg a novel)
- Scans (eq of historical documents that you clearly wouldn't be able to bring to class)
- Digital artefacts (eg tweets, memes)
- Items from the real world, eq washing-up gloves, a basketball.

As you can see, these objects can be:

• real or physically present in the class (so you can physically bring something with you)

or

• an image of the object (for objects where it's clearly not possible for you to bring it in).

If you have other ideas, it is recommended that you discuss these with your teacher.

Remember that the objects, as defined by the IB, must be:

A-Z for Theory of Knowledge (published by Elemi)

"pre-existing objects, rather than objects created specifically for the purposes of the exhibition"

This means that it is important that the objects have a real-world context outside the assessment (ie existing in a specific time and place). These contexts should also be specific. So, for example, a sonogram of your baby brother would work well, rather than a random sonogram found online.

#### **Get it right!**

If you can swap your object for another similar object and find that the commentary still applies then it is probably too general.

As with an art exhibition, the three objects could be placed in a certain sequence that you have chosen, giving viewers of your exhibition a sense of greater meaning and narrative (or story-telling), which you could also explain as part of your commentaries.

#### Is the exhibition just three objects? Or do I need to do something else?

You need to write a **commentary**, showing each object and identifying its real-world context, explaining why you have included it in the exhibition, and linking each object to the IA prompt. As this should total a maximum of 950 words in total, this comes to around 315 words per object. Citations and references should also be included

(note that these do not form part of the word count), as well as a title clearly indicating your chosen IA prompt.

### Examiner tip

You don't have to link each of your objects to each other. You only have to link them to the IA prompt you have chosen.

You can link them if you want to – but you don't have to.

#### How is the exhibition marked?

The exhibition is **internally assessed:** this means that your teacher marks it, but that your work is then **moderated** by IB examiners. If examiners judge that your teacher has marked inaccurately (perhaps too generously, or even not generously enough) then they can change not just your marks but the marks of others in your class.

Your teachers will advise you exactly what to do, but you should put all of the information described above into one file (.doc, .docx or .pdf) so it can be assessed, with photographs of your three objects).

Your TOK exhibition is worth 10 marks, and has a weighting of one third (or 33% of your course).

To get 9-1 0 marks, your exhibition should be:

- ✓ Clearly showing which three objects you have chosen and how they fit in to the real world
- ✓ Linking well to the chosen IA prompt
- ✓ Explaining why each object is important to the exhibition
- ✓ Supported by appropriate evidence
- ✓ Convincing, lucid and precise.

If you only provide two objects, you can only achieve a maximum of 6 marks out of 10.

If you do not use one of the IA prompts provided, you will be awarded 0.

Just as with all aspects of your IB Diploma studies and assessment, academic honesty is also vital.

#### Can I work in a group?

No – for the exhibition, you must work by yourself. You may also not use the same objects as anyone else in your class, so make sure you inform your teacher of your choices carefully and do not change any of your objects without telling them.

#### When will I do my exhibition, and how long will this take?

You must have eight hours of class time to complete the exhibition. During this time, your teacher will:

- explain the exhibition requirements to you
- make sure you understand the assessment instrument
- consult with you about what you will include in your exhibition's final version
- and give feedback on your first draft of the file that will be sent for moderation to the IB examiners.

It is possible that you will need to spend some time outside of class on the preparation of your exhibition as well. You will do this during the first year of the IB Diploma programme.

#### Can I have feedback on my exhibition from my teacher before it is sent to the IB?

Yes – your teacher is allowed to give you feedback on one **draft** of your exhibition file (as described above, this will be images, commentaries, references, and links to the chosen IA prompt). Your teacher can provide oral or written advice on how your work can be improved, but cannot edit your draft directly.

#### How will the exhibition be held in real life?

Of course, the TOK exhibition is not just a file of work sent to IB examiners – you will do a real-life exhibition in school. Depending on what your school decides is best, this could be:

- within your TOK class
- open to the whole school
- open to parents
- open to other schools in your area (and, by the same token, you could visit theirs)
- or even accessible online.

### Preparing my TOK exhibition

#### A Selecting my prompt

The prompts the IBO publishes are designed so that they are accessible to all students – no matter what you have studied in class. But that doesn't always make it an easy choice.

To help you select the prompt that will work best for you, follow these simple steps:

1 Look through the list of prompts. If you can't think of anything that you studied in class that relates to a particular prompt, then cross that prompt out.

This should leave you with a more manageable, shorter list from the 35 prompts given.

- 2 Think about if the prompts remind you of anything from your own life.
- 3 Think about objects you have at home that are used frequently perhaps, or objects you have that are meaningful to you. Could these relate to any of the prompts you have left?

#### Examiner tip

Sometimes by starting with objects that interest you, they can lead you to an appropriate prompt that fits well with them.

- 4 You can also consider 'objects' that you don't actually possess, but which still interest you. For example:
- the Bill of Rights (or a photograph/online picture of it, since you clearly can't bring the actual Bill of Rights to class)
- a political leader's Twitter feed
- a YouTube video that you like a lot
- or a still from a video game.

Could these connect with any of the prompts?

- 5 Highlight or circle prompts that connect to items you already have, or to objects which interest you.
- **6** After this process, you should have just a few prompts left. Try to plan them out (say, by making a spider diagram) or discuss them with your friends. If you find that the conversation quickly runs dry, or that you are soon out of ideas when making the spider diagram, then possibly this is not the right prompt for you.

It could be that you like a particular prompt a lot, but just need to find different objects for it. In the same way, you might want to keep the same objects, but choose a different prompt to fit them. Try different combinations and see what works.

Also, remember that your teacher is there to help you. If you have eliminated most of the prompts, but are still trying to decide between two or three of them, consult your teacher with the ideas that you do have. Maybe they will be able to steer you in the best direction for you.

#### My checklist

ave I													
chosen my exhibition prompt from the list provided by the IB?													
chosen my 3 objects?													
told my teacher what my 3 objects are?													
made sure my objects link to my prompt?													
written my commentaries for each object?													
checked that all the commentaries together do not add up to more than 950 words?													
taken photos of my 3 objects?													
put my photos and commentaries into a single file?													
asked my teacher for feedback on my commentaries?													

## Examiner tip

Maybe make sure the other person you ask to look over your work is an adult or someone outside your TOK class so as to avoid the risk of **plagiarism**.

	fine	-tune	ed m	у со	mme	ntari	es base	d on th	e fee	dba	ck gi	ven by	my ·	teachei	(eg	getting	another	person	to lo	ok o	ver
	it to	mal	ke su	ıre it	is c	lear a	and that	there	are n	o lo	gical	'holes	in t	he argi	umen	it)?					
_							•														

#### submitted the final version of my exhibition file to the IB?

### B Putting my exhibition together

Below you will see how one student has chosen their IA prompt and put together their selection of three objects to relate to the chosen prompt. **Please note** this is intended as a model to help explain the process and is not set out as the 'right way' to do it for you.

### Examiner tip

Of course, in the interests of academic honesty, you'd have to select your own prompt and objects. There's no point reproducing what someone else has done in the past, since you'd then find it very difficult to put together a convincing, lucid, and precise exhibition if it's not personal to you alone, so fail to achieve the best marks you can.

Step one: Choose my IA prompt from the list provided by the IBO. For example:

30. What role does imagination play in producing knowledge about the world?

Step two: Choose three objects that could relate to this prompt.

In this case:

1 Your baby cousin's toy car

Chosen because...it links to a small child, and small children have a lot of imagination. This links well to the prompt here, as it raises questions of how can we know if small children are imagining, or just re-enacting scenarios that they have already seen?

**2** A copy of your favourite novel

Chosen because...authors require a certain amount of imagination in order to produce novels, again linking to the key word of the chosen prompt.

This raises the relevant question, however, of how far authors are being (auto)biographical, and how far they are truly imagining; in the same way, how do we know whether writers are telling the whole truth, and how far real stories have been embellished with imagination?

Perhaps ultimately, how do we know whether the mixture of truth and fiction (or 'imagination') matters?

# Examiner tip

If choosing quite similar objects (eg as here, two pieces of creative writing) then make sure you make clear how their relationship to the prompt is different. This will help you to make sure that your commentary does not become repetitive.

**3** A poem you have written about a recurring dream

Chosen because...A poem written by links with the prompt as it, too, is the product of imagination. However, the difference between this and the previous choice – of a novel you have not written yourself – is that you are perhaps 'producing' knowledge in a different way compared to this knowledge having its origins in someone else's (ie the novelist's) experiences, as opposed to your own.

Layout considerations – in this case, the poet makes deliberate choices regarding the syllabic count of each line – also have the capacity to produce meaning and knowledge, in a way that is not so obvious or present in novels.