

Ways of knowing

The TOK course identifies eight specific ways of knowing (WOKs). They are:

language

sense perception

emotion

reason

imagination

faith

intuition

memory.

Students must explore a range of WOKs. It is suggested that studying **four** of these eight in depth would be appropriate. The WOKs selected for detailed study should be carefully selected to ensure a coherent and balanced approach.

There are two central purposes to the WOKs in TOK. On the one hand they are the tools that answer the question "how do we know?" and on the other hand they help us answer the question "how do I know?" For example, we can analyse the role of imagination in the construction of shared knowledge in terms of scientific discovery, but we can also discuss imagination in the context of personal knowledge and understanding.

While there may be a place in a TOK course to analyse WOKs and their impact on how individuals construct their own personal knowledge, TOK teachers are encouraged to explore WOKs, not in isolation, but from the perspective of their contribution to understanding different areas of knowledge.

Specific ways of knowing

Below is a brief introduction to each WOK. The questions preceding the description of each WOK are simply stimulus questions, designed to promote discussion and raise awareness of the individual WOKs and their impact on knowledge.

Language

How does language shape knowledge? Does the importance of language in an area of knowledge ground it in a particular culture? How are metaphors used in the construction of knowledge?

Language can refer to the mental faculty which allows people to learn and use complex communication systems, or it can refer to those systems themselves. Language consists of a system of signs with agreed or conventional meanings combined according to a set of rules for the purposes of communication, formulation of ideas, storage of knowledge or as a medium of thought. The term "signs" can be interpreted very broadly to include letters, symbols, sounds, gestures, images and even objects. Language is a crucial Ways of knowing Theory of knowledge guide 24

part of our daily lives, but is also filled with potential problem areas, for example, ambiguity, sarcasm, irony and translation issues.

Language plays an important role in communicating knowledge. However, some see language as having an even more central role, arguing that language doesn't just describe our experiences of the world but in fact actually structures those experiences. In the section on the knowledge framework there is a discussion about whether certain types of knowledge are actually constituted by language—the idea that language is part and parcel of the knowledge claim itself and not merely a description of something that exists independently of language. The view that facts about the world might be determined by the language is called linguistic determinism.

Sense perception

How can we know if our senses are reliable? What is the role of expectation or theory in sense perception? What is the role of language in sense perception?

Sense perception is the process by which we can gain knowledge about the outside world. Traditionally, there were believed to be five senses: sight, touch, smell, taste and hearing. However, many now argue that there are others such as a sense of heat, sense of pain, sense of movement, sense of balance and the senses of hunger and thirst, or a sense of where our body parts are.

Historically, the view that the senses provide the basis for all our knowledge was challenged by the idea that prior concepts might be needed before any perception takes place at all. Indeed, it is common now to view sense perception as an active process of interpreting the world according to prior expectations, conceptual frameworks and theories. There is, therefore, some disagreement as to whether we directly perceive the world as it is, or whether perception is an active process where we supply much of the content of our experiences ourselves.

Emotion

Are emotions universal? Can/should we control our emotions? Are emotions the enemy of, or necessary for, good reasoning? Are emotions always linked to belief?

The naturalistic view of emotions is that they are the products of natural processes, with physiological causes and effects. One supporter of this view was Darwin, who believed that emotions are purely physiological and therefore universal and experienced across all cultures. However, there seem to be many examples of culturally bound emotions, for example, the Chinese notion of "sad love". The opposite view is therefore that of the social constructionists, who argue that emotions depend on a social consciousness, and have no natural basis at all. For example, emotions such as shame seem to presuppose a notion of right and wrong.

Emotion has sometimes been regarded as an unreliable way of knowing. Emotions have, for example, been criticized as being irrational obstacles to knowledge that distort our picture of reality. However, others believe that not only do emotions help make sense of social and cultural experiences and behaviours, but they are also the source of social, ethical and political knowledge by helping us form an understanding of the world around us.

Reason

What is the difference between reason and logic? How reliable is inductive reasoning? Are we predictably irrational?

Reason allows us to go beyond the immediate experience of our senses. It is closely linked to logic—the deducing of valid conclusions from given starting points or premises. Human reasoning can also be inferential in nature, allowing conclusions to be drawn that cannot be strictly deduced from their premises. It then becomes an interesting question of whether standards of rationality and norms of reasoning are Ways of knowing Theory of knowledge guide 25

grounded in culture. Areas of knowledge might set their own requirements for the types of reasoning that are accepted.

Inductive reasoning is the process of supporting general statements by a series of particular ones—the reverse of deductive reasoning which tends to proceed from the general to the particular. Inductive reasoning is by its nature inferential. Statements involving the word “all” are often not strictly provable given the difficulties in making observations of an infinite set of particulars. This is of importance in the natural sciences but also in human sciences such as psychology and economics.

Imagination

What is the role of imagination in producing knowledge about a real world? Can imagination reveal truths that reality hides? What is the role of the imagination in understanding others?

Imagination is often identified in a narrow sense as the capacity to form a mental representation of something without the stimulus of sense experience. Traditionally imagination has been associated with imagery and making a mental image of something. However, more recently interest in the imagination has also focused on exploring propositional imagining, or “imagining that”. The importance and power of the imagination is highlighted by a number of medical conditions which impact upon it, for example, conditions which can impair imagination such as severe autism, or conditions which can cause delusions such as severe schizophrenia.

Imagination is sometimes viewed in a broader way as being associated with creativity, problem-solving and originality. Here it might be the making of connections between otherwise disparate ideas in order to solve problems. This might be useful in model making or theory creation in the sciences and solving structural problems in the arts. Imagination is, however, also sometimes distrusted, in part because it is regarded as something that is derived in the mind of the individual and therefore subjective. Imagining is also sometimes associated with counterfactual reasoning; imagining “what would happen if ...”, or “what would have happened if ...”.

Imagination is also sometimes associated with possibility, in that it can be argued that only things which are possible can be imagined. In this way, the imagination is seen by some to provide evidence of what is and is not possible. In daily life, imagination has a particularly prominent role in entertainment, for example, fictional films or television programmes. However, it can be argued that imagination also plays a deeper role, for example, in moral education, developing empathy, or providing opportunity for self-expression and an increased understanding of the self.

Faith

Should humanism or atheism be described as a faith? Can theistic beliefs be considered knowledge because they are produced by a special cognitive faculty or “divine sense”? Does faith meet a psychological need?

The term “faith” is most frequently used to refer specifically to religious faith, but can also be used in a secular sense as a synonym for trust. Although most associated with belief in a God or gods, faith can be religious without being theistic, for example, in Buddhism. Alternatively it can be seen as a commitment to a particular interpretation of experience and reality which is not necessarily religious at all, such as humanism. Logical positivism claims that statements of faith have no meaningful cognitive content, so it doesn’t make sense to speak of faith as a way of knowing. However, for many people faith is a key way in which they try to understand and explain the world.

The evidence on which faith is based on is often controversial. This is particularly the case in the example of scripture, which those within the religious group often see as infallible evidence, while those outside the religious group might be more circumspect. While critics argue that faith is irrational and incoherent, others would argue that faith should be seen as a way of going beyond reason rather than being purely irrational. Indeed, although faith is often contrasted with reason, many religions regard faith and reason as Ways of knowing Theory of knowledge guide 26

interdependent, for example, natural theology argues that it is only possible to access God through reason, and many religions regard reason as a God-given gift.

Some would argue that the criticism and controversy surrounding the evidence for faith claims is misplaced, arguing that faith is an act of trust and is an example of knowledge which is not evidence based. Indeed, in some traditions belief that is not based on evidence is seen as superior to belief that is based on evidence, the demand for concrete evidence being seen to signify a lack of faith. Given this controversy, teachers should provide the opportunity for a critical discussion of faith as a way of knowing. Its inclusion as a way of knowing should not be seen as an excuse for unthinking acceptance of knowledge claims in religion or other areas of knowledge.

Intuition

Why are some people considered more intuitive than others? Are there certain things that you have to know prior to being able to learn anything at all? Should you trust your intuition?

Intuition is sometimes described as immediate cognition, or knowledge which is immediately evident without prior inference, evidence or justification. Intuition is often contrasted with reason, as it is regarded as knowing without the use of rational processes. Jung (*Psychologische Typen* 1921) famously referred to intuition as perception via the unconscious, highlighting the idea that intuition is often seen as beliefs which are known without understanding how they are known.

Intuition is sometimes associated with the concepts of instinct and innate knowledge. For example, some would argue that although we do not have innate knowledge of any particular language, we have an intuitive capacity to use language. Intuition has been much discussed in the field of ethics in terms of whether we have moral intuition, or a kind of innate sense of right and wrong. It is also seen by some to play an important role in scientific advances.

To know something by intuition is to know something through introspection or an immediate awareness. In this way, some argue that it is impossible to justify, or that as it is immediately evident it requires no further justification. Some people are regarded as more intuitive than others, with intuitive people often being said to make quick instinctive decisions without having any identifiable rationale for those decisions. However, some have denied the existence of intuition as a separate way of knowing. For example, it has been suggested that intuition is a term which is often used to describe a combination of other ways of knowing, such as prior experience, heightened sense perception and an active imagination.

Memory

Can we know things which are beyond our personal present experience? Is eyewitness testimony a reliable source of evidence? Can our beliefs contaminate our memory?

Many discussions of knowledge tend to focus on how beliefs and knowledge are formed rather than on how they are remembered by the individual. However, most of the knowledge that individuals have is in the form of memory and therefore how we retain information and how past events and experiences are reconstructed is an important aspect of how personal knowledge is formed.

Memory, and particularly habit, has a strong link to procedural knowledge and remembering how to perform actions. In contrast to perception, memory refers to things which are not currently happening. And in contrast to imagination, memory refers to things which we believe really happened. Some would argue that memory is not itself a source of knowledge, but instead is a process which we use to recall knowledge gained in the past. However, although memory refers to knowledge gained in the past, it can be argued that even new knowledge is dependent on and influenced by memory. For example, how we interpret new situations can be heavily influenced by experience and previous events. In this way, apart from being a Ways of knowing Theory of knowledge guide 27

"storage unit" for existing knowledge, memory can also be a mechanism that allows us to process new and unique situations.

The importance of memory can be highlighted by imagining the challenges that would be presented by losing our memory. Because so much of our personal knowledge is in the form of memory, issues surrounding the reliability of memory are also crucial. Memory retrieval is often regarded as unreliable, for example, because it is seen to be subjective or heavily influenced by emotion. However, we rely on our memory every day and because many of our memories seem to be reliable, this gives us confidence that our other memories are reliable.

Ways of knowing do not operate in isolation

Ways of knowing should not be viewed in isolation. They interact in various ways in the construction of knowledge and the formation of knowledge claims. For example, even a simple claim such as "this table is blue" involves a number of ways of knowing coming together. I need language to be able to understand the terms "table" and "blue". I need a conceptual system based on reason to realize that a table is something that has the possibility of being blue. I need sense perception to recognize that what I see is a table and that the colour of the table is blue. In this way, the individual ways of knowing are woven together into more elaborate structures in order to generate knowledge in the areas of knowledge.