



Reflections on IIE-2018

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The Goal of IIE

Looking back at the activities prompted by the ten sets of Learning Triggers of IIE-2018, you would notice that IIE is an introduction to what we would like to call an *Applied Theory of Knowledge*:

a *theory of knowledge*, because it explores the nature of human knowledge, types of knowledge, and ways of arriving at, justifying, and evaluating knowledge claims; and

applied, because our primary purpose in developing this theory is to use it as a foundation for:

- (a) ***independent learning*** (for students), and
- (b) ***curriculum design*** (for educators).

[Curriculum includes *syllabi, learning materials, teaching materials, classroom pedagogy, and assessment.*]

Now that all the LTs are over, we urge you to *go back to all the materials we have sent you, and reflect on how successful or unsuccessful IIE-2018 has been from your perspective in helping you see how an applied theory of knowledge can serve as the foundations for independent learning and curriculum design.*

Background Assumptions

A few words about ‘Applied Theory of Knowledge’ may help in going through and consolidating what you have learnt from IIE:

- A. We have referred to ***Academic Knowledge*** more than once in the course. Academic knowledge is the body of knowledge *produced by professional ‘researchers’, and transmitted to students through classrooms, textbooks, and encyclopedias.* To understand what is special about academic knowledge, we need to consider it in the context of other kinds of knowledge, such as common sense knowledge, folk knowledge, traditional knowledge, and religious knowledge,
- B. Academic knowledge is created and justified within the context of the ‘***Academic Culture***’. Now, a ***culture*** is a composite of shared beliefs, practices, attitudes, norms, values, and predispositions of a community. ‘Academic Culture’ is the culture of the ‘academic community’ — the producers of academic knowledge. IIE tries to sensitize you to some of the unique features of academic culture.
- C. You may have heard of C P Snow’s seminal book, *The Two Cultures*. (downloadable at: http://sciencepolicy.colorado.edu/students/envs_5110/snow_1959.pdf) In it, Snow points to the fragmentation between two sub-cultures of the academic community: the science-math culture, and the humanities-social sciences culture.

We think Snow’s insight was on the right track, but the picture is oversimplified. For one thing, there are multiple academic cultures, not just two, with criss-crossing norms, values, and habits. For another, the differences between them don’t match the traditional typology of mathematics, science, social science, and humanities. So, physical and biological sciences are both sciences, but their cultures are quite distinct. The practice of constructing theories in terms of definitions and axioms/laws is shared across mathematics, physics, linguistics, and analytic philosophy, but not biology, psychology, sociology, and human history. There are many such differences in the sub-cultures of academia that are important for us to understand., and are relevant when we consider the idea of trans-disciplinarity, an idea that is at the heart of ThinQ.

Types of Knowledge

As hinted at above, IIE's goal is to *help you become reasonably proficient participants of academic culture*. To see what this means, we need to understand what is unique about academic knowledge, the modes inquiry that result in academic knowledge, and the beliefs, values, practices, norms, and predispositions of the culture in which academic knowledge and academic inquiry are embedded. To do that, we need to begin with a typology of knowledge:

Experiential Knowledge: what we learn from our own personal experience, without any prompting from others, and without any intervention through language. e.g., Those who have accidentally stubbed their toe against a rock know that it is painful to stub one's toe, even if they have not been exposed to any language with words for 'toe', 'pain', and 'stub'. Those who have eaten both lime and sugar know that sugar is sweet and lime is sour, even if they have not been exposed to any language with words for 'lime', 'sugar', 'sweet' and 'sour'.

Hearsay Knowledge: what we learn from other people, without critically examining what they say, e.g., children (and sometimes adults as well) believe that once upon a time, there lived dinosaurs on earth, not because they have seen dinosaurs, they have examined the evidence that they existed, or examined the reasoning based on observational reports, but because they have been told so, and they trust what they are told without doubting and questioning. They believe that all matter is made up of atoms, again because they have been told so, not through critically examining the claim.

Examined Knowledge: a body of statements that we have critically examined, and have come to accept as rationally justified conclusions, on the basis of critical thinking.

Given these distinctions, folk knowledge, traditional knowledge, and religious knowledge are forms of knowledge that are not examined. School knowledge (the knowledge received from textbooks and teachers) is also a form of unexamined knowledge. Our responsibility as educators is to help the young move from unexamined knowledge to examined knowledge.

Why is this important? Because we are surrounded by advertisements, propoganda, and fake news. And helping the young develop the capacity to protect themselves against advertisements, propoganda, and fake news is important.

(See the Wikipedia entry on Fake News at https://en.wikipedia.org/wiki/Fake_news and "Who Falls for Fake News?" at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3023545)

Take fake news. Now, news is a special kind of knowledge, typically reported by journalists. Fake news is a statement or set of statements that are false, but are designed to make us believe that they are true. Extending this concept to knowledge, we may say that *fake knowledge* is a set of statements that are false, but they are designed to make us believe that they are true.

Science is a branch of academic knowledge. Given our concept of fake knowledge, we may define *fake science* as that which pretends to be science: it is a set of statements or an approach that have no place in science, but are designed to make us believe that it is science. Popper's 'falsifiability criterion' was proposed to distinguish what he called *pseudo-science* (fake science) from *science*.

The best way of helping children develop the capacity to protect themselves against fake knowledge, including fake news, is to get them to interrogate what textbooks and teachers say, and separate reliable knowledge from fake knowledge. For instance, do the so-called science textbooks offer fake science? One of the endeavours of IIE has been to help students and educators become sensitive to such questions. It is for you to decide whether the endeavour has been successful.

What IIE-2018 has covered (and not covered)

In IIE-2018, we dealt with mathematical, scientific, and conceptual inquiries in some detail. We are also sending you something on ethical inquiry, though there was no discussion of it. We did not go into aesthetic inquiry in the course.

For those interested in philosophical inquiry (which includes conceptual inquiry and ethical inquiry), we highly recommend the movement called Philosophy for Children (they call it P4C). For a brief idea of what the P4C educators do, and how it is in harmony with IIE, take a look at:

"Emma Worley and Peter Worley -- Teaching Philosophy to Children" at https://www.youtube.com/watch?v=C0y15M_9AAY

"Plato not Playdough Peter Worley at TEDxGoodenough College" at <https://www.youtube.com/watch?v=dQzK4XCXV7c>

(About 11 minutes into the video, we see 8-year old Alice, who obviously has never heard of the Nirguna Brahman variety of Advaita Vedanta, demolishing the Nirguna Brahman concept.)

"Can Children do Philosophy?" at <https://www.youtube.com/watch?v=3libtEidL7A>

When watching this video, pay special attention to Catherine McCall, director of EPIC (European Philosophical Inquiry Centre), and Peter Worley, CEO and co-founder of The Philosophy Foundation.

McCall's talk (the first fifteen minutes of the video) supports the position that primary school children can do philosophy. She points out that:

- a) sharing one's opinions is not doing philosophy. Philosophical thinking calls for stating reasons for your position, engaging with multiple positions, listening to others, correcting oneself, engaging with abstractions and complex ideas, ...
- b) Piaget was simply wrong in claiming that young children cannot deal with abstract thinking and reasoning.

Peter Worley's talk is from 21 to 28 minutes. His book, *The IF Machine: Philosophical Inquiry in the Classroom*, ought to be compulsory reading for members of School Boards, as well as for any educator who decides to work outside of School Boards and exams.

We hope that there will be a discussion of some of these issues in the Discussion Forum (e.g., Does Philosophy for Children — P4C — referred to above contribute to developing the capacity to protect oneself against fake knowledge?)

What have you learnt?

Having gone through the above material, and having reflected on the question of whether we have provided adequate environment and triggers for you to learn what we were hoping you would learn, it is now time to turn your attention to yourself. How successful do you think you have been in learning what we were hoping you would learn? (Notice that we are not asking you whether you have arrived at some expected target, but the intensity and breadth of learning you have accomplished, granted that there is no stage when you can say, "Yes, I have reached it." As we have pointed out earlier in the course, IIE calls for climbing a mountain that keeps getting higher and higher so that no one ever reaches the top.)

[Please use these thoughts as the background for your Assignment for LT 10.]