

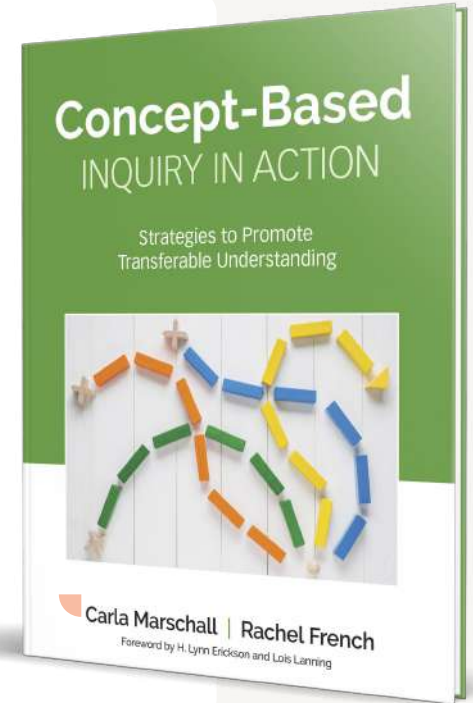


Concept Based Teaching & Learning Approaches in IBDP Economics

Steve Vorster

Introduction

1. The **rationale** for CBTL
2. An **overview** of CBTL
3. Leveraging CBTL strategies **for all components**
4. Five **Focus Strategies** for concept formation
5. An **Investigate & Organise** concept formation strategy
6. **Scaffolding** CBTL Approaches over time
7. Linking to concepts through **activities** and **case studies** using the Kognity Textbook



The Rationale for **Concept** Inclusion

Two main drivers

- 1) The 2008 financial crisis prompted severe criticism of how economics teaching has **remained unchanged** for the best part of fifty years. The models and theories have not been updated, as is the case in many other disciplines.
- 2) There is a desire to produce a more critically thoughtful DP Economics student whose learning journey is holistic (as opposed to topical) and to deliver the curriculum in a way that gets students **engaging more strongly with complex real world issues**.

The Rationale for **Concept** Inclusion

“While there are threshold concepts in economics, as elaborated in the next section, these are arguably **not explicitly addressed** in entry-level economics units and these threshold concepts do not guide the curriculum design. Traditionally, the content of economics guides the curriculum design, and hence the result is the aforementioned **homogeneity of courses across institutions and time.**”

Karunaratne, P., Breyer, Y. and Wood, L., 2016. Transforming the economics curriculum by integrating threshold concepts. *Education + Training*, 58(5), pp.492-509.

The Rationale for **Concept** Inclusion

“Thus, these concepts are presented to students in an implicit rather than an explicit sense. A disadvantage of this approach as noted by Meyer and Land (2003), is that the targeted student cohort could potentially **not be presented with an opportunity to grasp the threshold concept itself.**”

Karunaratne, P., Breyer, Y. and Wood, L., 2016. Transforming the economics curriculum by integrating threshold concepts. *Education + Training*, 58(5), pp.492-509.

The Rationale for **Concept** Inclusion

“According to Meyer and Land (2003), threshold concepts are transformative, integrative and troublesome concepts that **give practitioners a lens, portal or a gateway to view scenarios**. A curriculum designed with threshold concepts as the guide to structure the content would revolve around **training students to utilise these transformative and integrative concepts** to approach contemporary, **dynamic problems**.”

Karunaratne, P., Breyer, Y. and Wood, L., 2016. Transforming the economics curriculum by integrating threshold concepts. *Education + Training*, 58(5), pp.492-509.

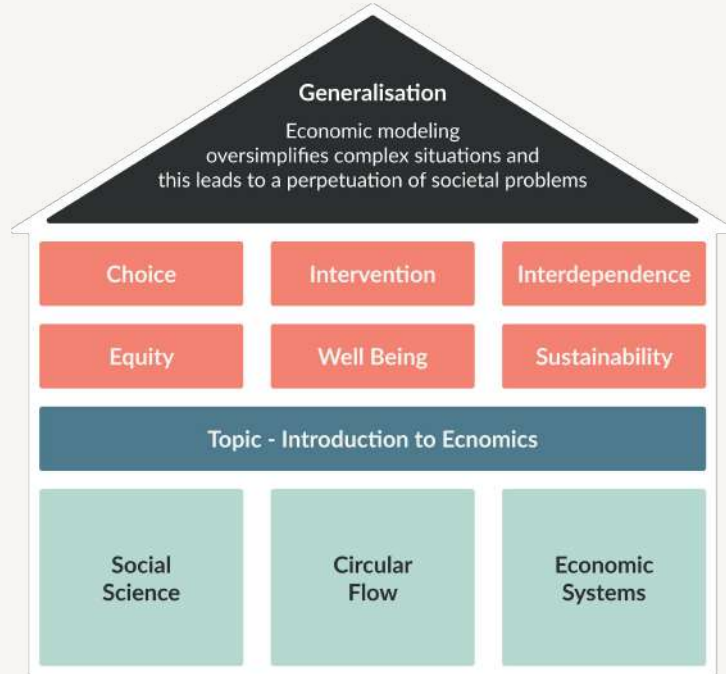
The Rationale for **Concept** Inclusion

“By transforming an entry-level economics curriculum by integrating threshold concepts, learners should be able to grasp these concepts of economics, and **achieve an improvement in a course’ s set learning outcomes**. Beyond the course, learners should be able to **apply these concepts to the dynamic world that they will graduate into**. This dynamic world is one which the existing, content-based curriculum is unable to adequately prepare them for, as the **content may in fact be, or eventually become irrelevant**.”

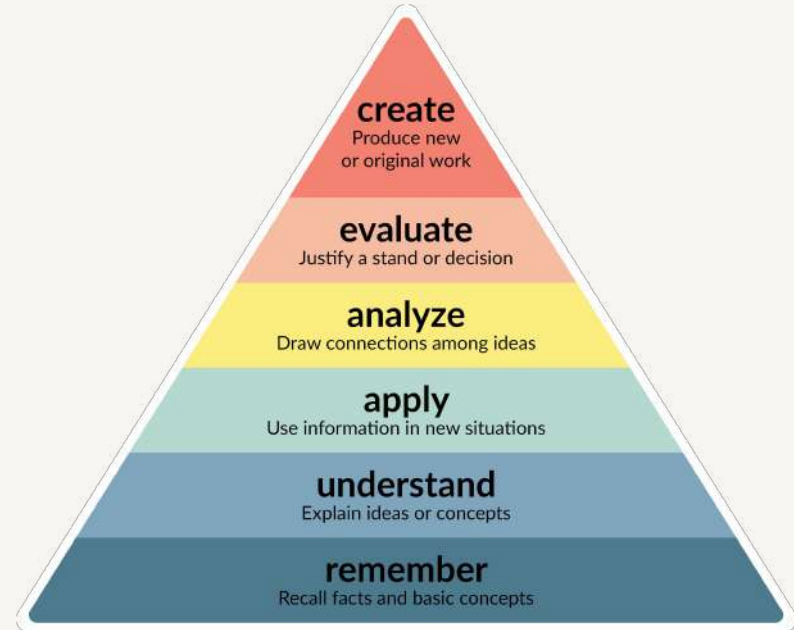
Karunaratne, P., Breyer, Y. and Wood, L., 2016. Transforming the economics curriculum by integrating threshold concepts. *Education + Training*, 58(5), pp.492-509.

The Goal of CBTL

Application to Real World Issue



Bloom's Taxonomy



Modified from source: H. Lyn Erickson: 2011
The Economics Academy

Leveraging CBTL for **ALL** Components

Paper 1



Part b) 15 marks

More time and higher expectations with regard to synthesis, evaluation and critical thinking.

Paper 2



Part g) 15 marks

The use of information from the text/data is appropriate, relevant, and is used to formulate a reasoned argument supported by **analysis/evaluation**.

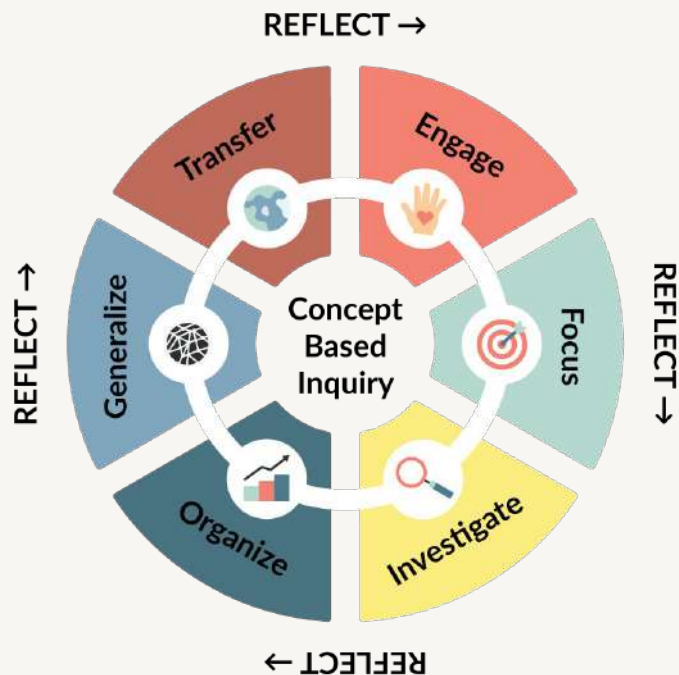
Paper 3



Part b) 10 marks

The response contains evidence of **effective and balanced synthesis** or evaluation. Recommend requires normative economics which calls for concept use.

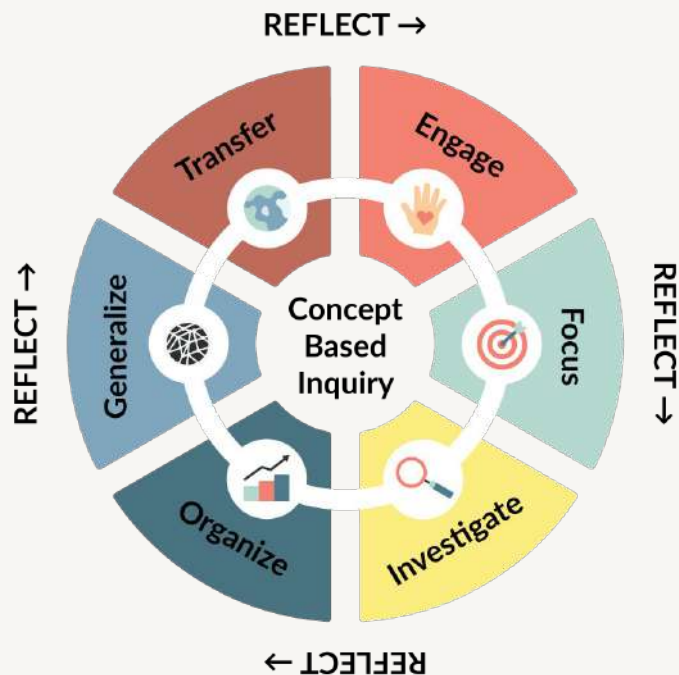
An Overview of CBTL






Phase of Inquiry	Purpose
Engage	<ul style="list-style-type: none"> To engage children emotionally and intellectually in the unit To activate and assess students' prior knowledge To invite initial student questions
Focus	<ul style="list-style-type: none"> To develop a shared understanding of the unit's driving concepts using concept formation strategies To introduce relevant factual examples that may be explored further in the Investigate Phase of inquiry
Investigate	<ul style="list-style-type: none"> To explore factual examples, or case studies, and connect these to unit concepts To expand student understanding of unit concepts by providing case studies that introduce complexity and/or raise additional questions To acquire disciplinary and interdisciplinary skills

Marschall, C. and French, R., 2018. Concept-Based Inquiry In Action. Thousand Oaks: SAGE Publications.

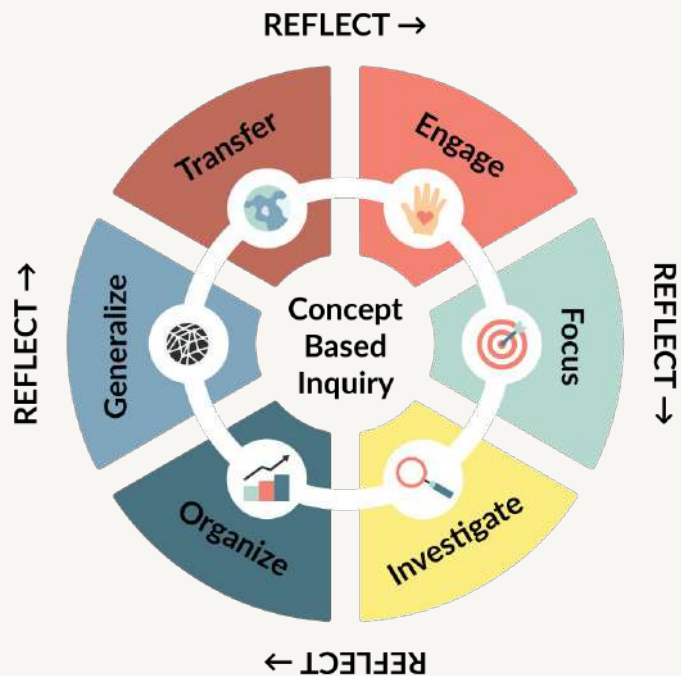
An Overview of CBTL



Phase of Inquiry	Purpose
Organize 	<ul style="list-style-type: none"> To organize thinking at both the factual and conceptual level To represent concepts and ideas using different materials, media, and/or subject areas To recognize and analyze skills in context
Generalize 	<ul style="list-style-type: none"> To form connections and locate patterns across factual examples To articulate, justify, and communicate generalizations
Transfer 	<ul style="list-style-type: none"> To test and justify the validity of generalizations To apply generalizations to new events and situations To use experiences and understandings to form predictions and hypotheses To take meaningful action on one's learning

Marschall, C. and French, R., 2018. Concept-Based Inquiry In Action. Thousand Oaks: SAGE Publications.

Engaging: using provocative statements and **essential questions**



Engage



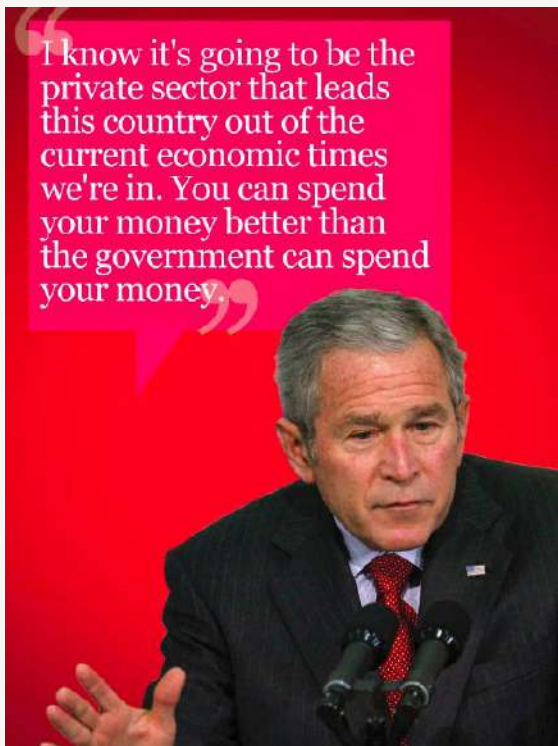
- To engage children emotionally and intellectually in the unit
- To activate and assess students' prior knowledge
- To invite initial student questions

Essential Questions

The world population has gone from 1bn to 7bn in 200 years. We can still feed most of them. Is scarcity really an issue?

The natural sciences have evolved rapidly through research, innovation and technology - should we expect Economics as a social science to also evolve rapidly?

Engaging: using **provocative statements** and essential questions



“I know it's going to be the private sector that leads this country out of the current economic times we're in. You can spend your money better than the government can spend your money.”

Provocative Statements

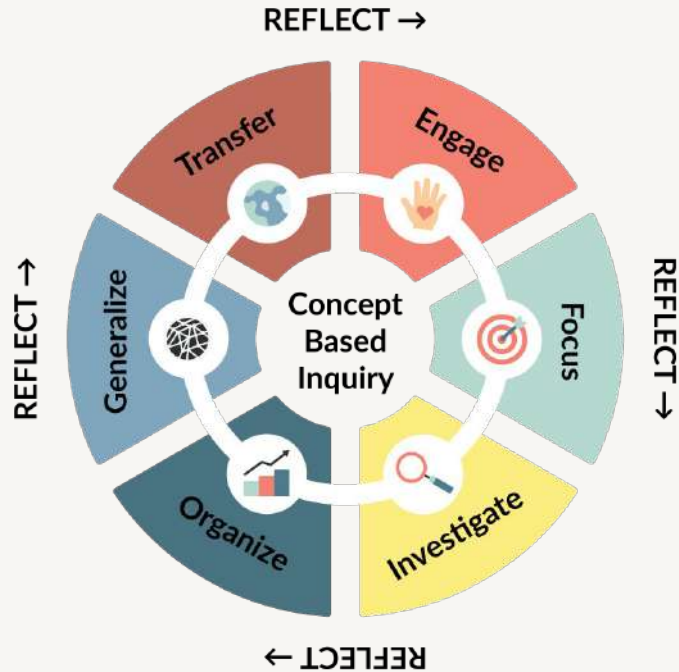
“The poor should be paid less because they do not have the skills or education that I have” - What do you think?

“People are only ‘worth’ the level of their skills and education” - What do you think?

As long as GDP is growing, it doesn't matter what causes our GDP growth. What do you think?

“If you can't afford it, you can't afford it. That's the end of the story.” What do you think?

Focus: Concept Formation Strategies



Focus



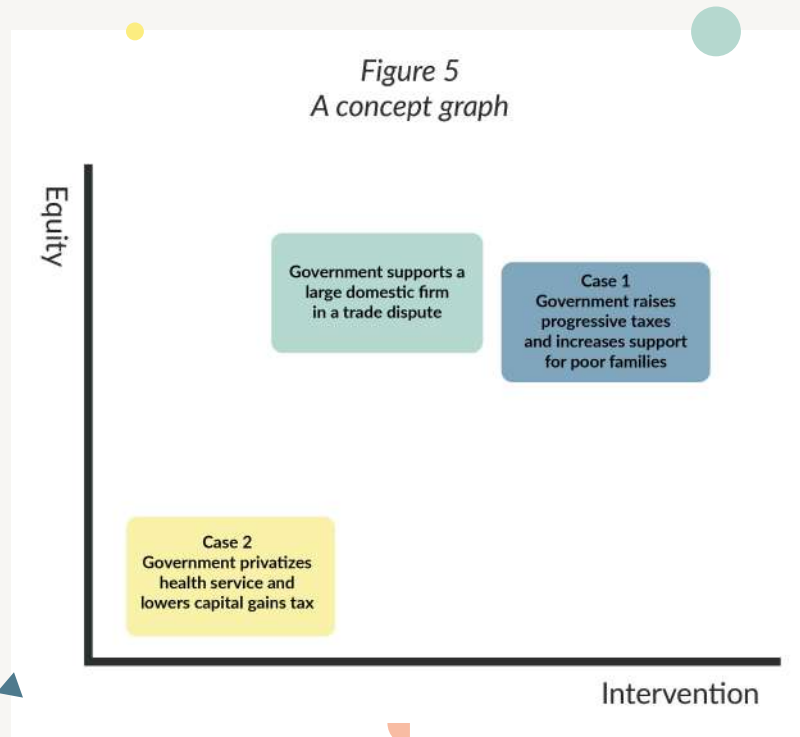
- To develop a shared understanding of the unit's driving concepts using concept formation strategies
- To introduce relevant factual examples that may be explored further in the Investigate Phase of inquiry

1. Using concept graphs
2. Using concept posters
3. PechaKucha Concept Formation
4. Frayer Model
5. Perspectives

Strategy One: Using Concept Graphs

Activity outline

- Choose 3 short news articles that connect to two concepts you wish to explore.
- Allow students to use mini whiteboards or create a standard A3 placemat they can label with each use.
- Each student reads each article and extracts key ideas that link to the two concepts and on a post it note write down 'how and why'.
- Students make a judgement as to where each case fits on the graph, then discuss differences, justifying their placement.



Strategy Two: Using Concept Posters

Activity outline

- Place concept posters in your classroom, or share them on your screen at certain points to stimulate discussion.
- Great for spontaneously developing concept formation.

Example

During Macro when considering the consequences of economic growth, you can watch a short video on the deforestation of the Amazon Rainforest. Then follow up immediately with small group discussions around the essential questions found on the poster.



Strategy Three: PechaKucha Concept Formation

Activity outline

- Place 10 - 20 images into a slide presentation.
Mix and match photos with data charts.
- PechaKucha time limit is usually 20 seconds, but double that to 40 for this activity.
- Snappy activity that requires topic identification and concept explanation.

CEOs make 312 times more than typical workers

CEO-to-worker compensation ratio, 1965–2017

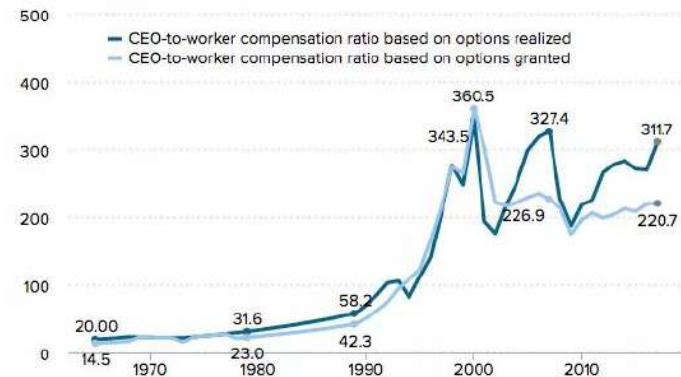


Chart Data

Notes: CEO annual compensation is computed using the "options realized" and "options granted" compensation series for CEOs at the top 350 U.S. firms ranked by sales. The "options realized" series includes salary, bonus, restricted stock grants, options realized, and long-term incentive payouts. The "options granted" series includes salary, bonus, restricted stock grants, options granted, and long-term incentive payouts. Projected value for 2017 is based on the change in CEO pay as measured from June 2016 to June 2017 applied to the full-year 2016 value. Projections for compensation based on options granted and options realized are calculated separately. "Typical worker" compensation is the average annual compensation of the workers in the key industry of the firms in the sample.

Source: Authors' analysis of data from Compustat's ExecuComp database, the Bureau of Labor Statistics' Current Employment Statistics data series, and the Bureau of Economic Analysis NIPA tables

Strategy Three: PechaKucha Concept Formation

Example

Topics

Labor market

Price determination

Economics of inequality

Minimum wages

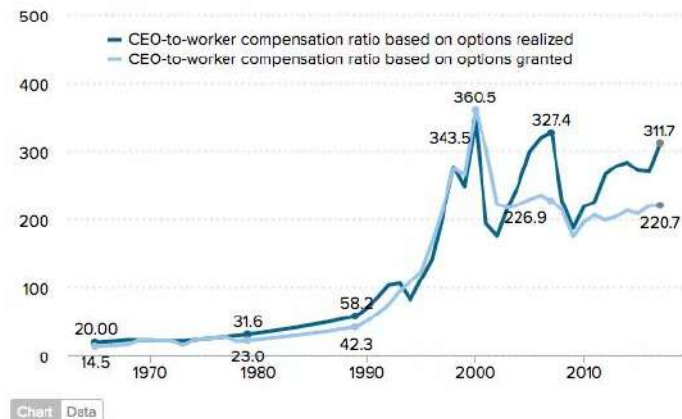
Concepts

Inequity resulting in inequality - with CEO's getting paid more than 312 x the TYPICAL worker, the gap with lowest paid workers is even higher.

CEO's earn in one day what the typical worker earns in a year.

CEOs make 312 times more than typical workers

CEO-to-worker compensation ratio, 1965–2017



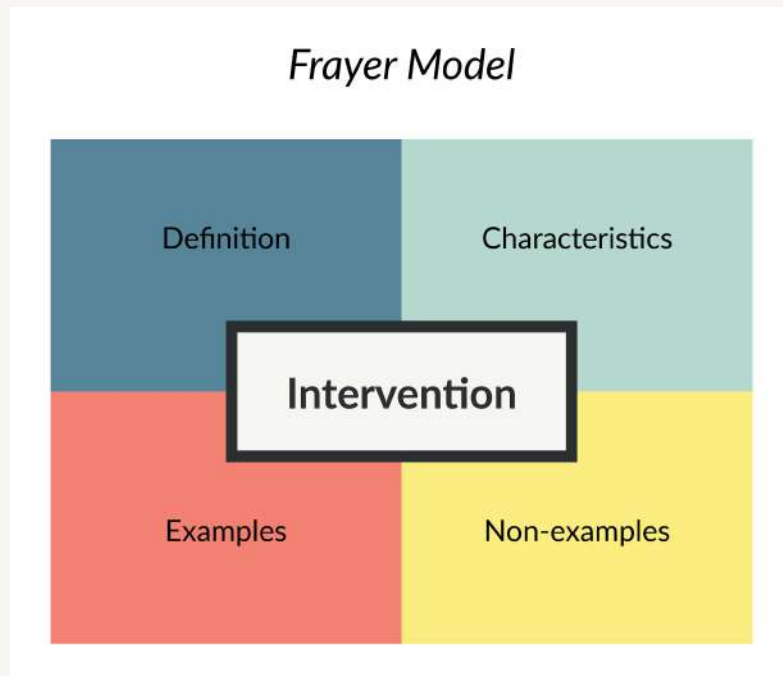
Notes: CEO annual compensation is computed using the "options realized" and "options granted" compensation series for CEOs at the top 350 U.S. firms ranked by sales. The "options realized" series includes salary, bonus, restricted stock grants, options realized, and long-term incentive payouts. The "options granted" series includes salary, bonus, restricted stock grants, options granted, and long-term incentive payouts. Projected value for 2017 is based on the change in CEO pay as measured from June 2016 to June 2017 applied to the full-year 2016 value. Projections for compensation based on options granted and options realized are calculated separately. "Typical worker" compensation is the average annual compensation of the workers in the key industry of the firms in the sample.

Source: Authors' analysis of data from Compustat's ExecuComp database, the Bureau of Labor Statistics' Current Employment Statistics data series, and the Bureau of Economic Analysis NIPA tables

Strategy Four: The **Fray** Model

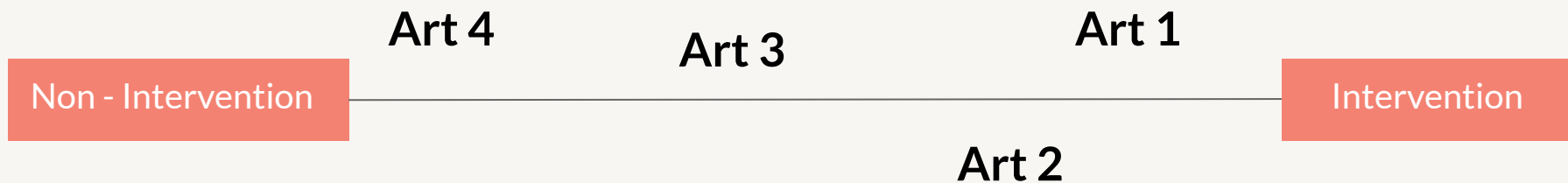
Activity outline

- Use early on to help concept formation.
- Choose a concept to focus on.
- Select 3-4 articles that display varying degrees of the concept – and some that are not related to the concept at all.
- Have students define the concept, then separate the articles into Examples and Non-Examples.
- Then summarise the characteristics of the concept that are found in the examples.



Combine with real world continuum?

Strategy Four: The **Framer** Model with **Concept Continuum**



Activity outline

- Have students make a judgment about where they think the characteristics of this intervention would place it on a continuum.
- Students justify the placement and discuss differences of opinion.

Strategy Five: Perspectives



Activity outline

- Create perspective cards that represent different stakeholders in the economy.
- Summarise a government policy in one paragraph and project out for the class to read.
- Ask students to discuss which concepts are most connected to the policy action and have them justify their insights.
- Now hand out perspective cards and ask them to consider which concept each stakeholder is likely to connect with more - and why. Justify again.

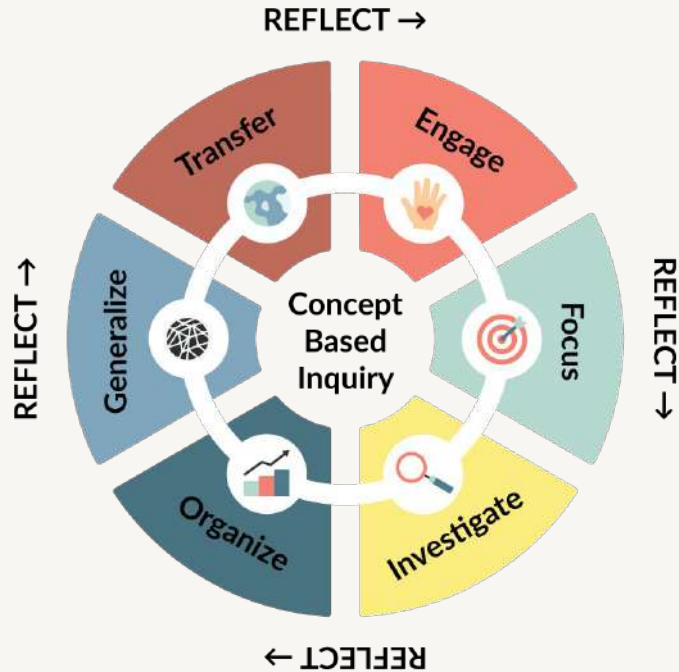
Strategy Five: Perspectives



Scenario

As part of its strategy to protect oceans from plastic waste, the British government has decided that all shops in the country must charge 10 pence (about 13 U.S. cents) for single-use carrier bags from next April. Doubling the current charge of five pence (about 6.5 cents), the new tax on plastic bags will apply to all small shops as well as major large supermarkets, the government said Monday.

Investigate and Organize: Concept **Formation** Strategies



Investigate



- To explore factual examples, or case studies, and connect these to unit concepts
- To expand student understanding of unit concepts by providing case studies that introduce complexity and/or raise additional questions
- To acquire disciplinary and interdisciplinary skills

Organize



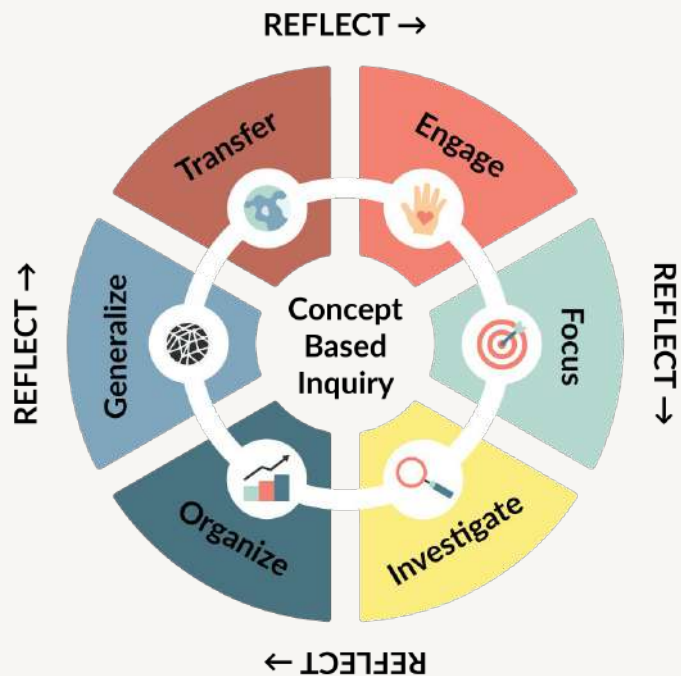
- To organize thinking at both the factual and conceptual level
- To represent concepts and ideas using different materials, media, and/or subject areas
- To recognize and analyze skills in context

Investigate and Organize: Concept **Formation** Strategies

Analysing Elasticities

Case Studies	Write 1-3 sentences to describe the article.	What markets and related markets are affected? How? Analyse each one.	Provide textual evidence of PED, XED, or PES, be sure to include any data	Explain the quote you used. What kind of elasticity is present and what causes it? E.g. for inelastic demand there may be a lack of substitute	Which of the following CONCEPTS connects most to your real world example - and how? Choice, scarcity, interdependence, change
Copper Link					
Diamonds Link					
AirBnb					
PC's and mobile devices					

Scaffolding CBTL Approaches Over Time



Suggested approach

- Demonstrate each approach a few times with prepared resources.
- Have students create resources for different approaches.
- A student or group of students sets up the concept-based element of the lesson and runs the discussion.

New Kognity Textbook – Links to Concepts

Concept

Economic well-being

Protectionism is where the government intervenes in the market to levy tariffs, quotas and subsidies to disrupt free trade. It allows the government to intervene in the market and create competitive advantages through higher prices (tariffs) or lower costs (subsidies) for domestic firms.

Protectionism creates trade-offs in economic well-being: there will always be winners and losers. For example, tariffs make domestic firms better off (increased output) at the cost of consumers (higher prices).

When you are studying this subtopic, consider the following questions.

How can we manage the trade-offs in protectionism that reduces economic well-being for some stakeholders in order to benefit others?

How can we justify government intervention in the market if there is no market failure?

New Kognity Textbook – Real World Issues

Topic 2: Microeconomics

Real-world issue 1: How do consumers and producers make choices in trying to meet their economic objectives?

2.1	Milk consumption & demand in the US
2.2	Cobalt supply
2.3	Impact of focus on sustainability on demand and supply
2.4	Default organ donator status
2.5	Price elasticity of facemarks during the 2020 coronavirus pandemic
2.6	Cocoa bean supply



Thank you for joining us!

Free Resources for CBTL Concept
Formation

<https://bit.ly/econ-academy>

Steve Vorster

mrsvsing@gmail.com

www.theeconomics.academy