



## **Expected Student Workload**





#### **Lecture Description**

To promote active engagement in sustainability transitions, sustainability professionals must adapt their findings and interpretations to captivate key stakeholders from across industry, academia, and the global public. This lesson guides students through the practice of identifying knowledge gaps and reducing assumptions to develop targeted explanations and interpretations of sustainability assessments for any audience.



#### **Lecture Goals**



Identify the knowledge gaps between different readers and visualize the content/context needed to bridge those gaps.

Improve the engagement of different stakeholders by enhancing your explanations and tailoring your context for each audience.



Skills we will develop today

#### **Systems Thinking**

- Think across boundaries
- Identify cascading effects
- Explain how systems interact

#### Strategic Thinking

- Design and create plans
- Implement strategies

#### **Interpersonal Communication**

- Engage stakeholders
- Identify intrinsic values
- Speak across, between, and within different groups



## **Learning Objectives**

	Remember	Understand	Apply/Evaluate	/Create
Systems Thinking	Students can identify stakeholders across the value chain.	Students can place stakeholders in a linear order considering knowledge gaps and needed context	Students can practice developing a map of stakeholders and placing context at home and then can work in small groups to improve and enhance their illustrations.	Students can utilize their illustrations by developing and evaluating their final two (2) summaries and interpretations.
Interpersonal Communication	Students can recognize knowledge gaps between different stakeholders.	Students can be able to match needed context and definitions to different knowledge levels.	Students can test explanations for different stakeholders through group pitches and peer feedback.	Students can apply their enhanced explanations by writing an executive summary, a general summary, and a detailed interpretation.
Strategic Thinking	Students can highlight the roles of each stakeholder in executing their recommendations.	Students can position knowledge, context, and recommendations in relation to short-term and long- term outcomes.	Students can draft transition timelines or suggest implementation strategies for their recommendations.	Students can adapt their recommendations to reflect the implementation capabilities of each audience.
Normative Thinking	Students can recognize the relationship between their recommendations and existing sustainability infrastructure.	Students can succinctly relate their recommendations within the existing sustainability infrastructure for their stakeholders.	Students can validate their recommendations using existing sustainability policies and initiatives.	Students can recommend improvements to sustainability infrastructure based on their work.
Anticipatory Thinking	Students can explain their recommendations in the context of a sustainable future.	Students can integrate their vision for the future with opportunities and barriers which can impact their recommendations and findings.	Students can rehearse, sharing their vision for the future through group pitches and peer critiques.	Students can incorporate their vision in their interpretation of their experiments and findings.



Sample Lecture

# The Knowledge Gap: Writing Interpretations that make an impact.



# We live in a world of stories: The stories we tell matter





Social media – your personal story



News Media - tonight's leading story



# "What does a story invoke in a person that brings forward the humanity necessary for a more livable world?"

# **Terraform: Building a Better World**

# Propaganda





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By Jane Byrne 🔄 23-Feb-2021 - Last updated on 23-Feb-2021 at 15:07 GMT f У in 🖂

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Life Cycle Analysis finds Cargill's EVERSWEET® stevia sweetener proves to be "sweeter" to the earth than other stevia options

Life Cycle Analysis, Virtual Stevia Harvest Experience offer greater transparency into company's stevia sustainability efforts



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Reservoirs are a major source of global greenhouse gases, scientists say





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### Anyone can access our study and data

We cannot depend on our audience consisting only of academics or professionals in our field

## In interpretation it is our responsibility to:

- Engage a general audience in understanding the quality and reliability of our findings.
- Provide parameters for the intended application of our data.
- Make explicit and clear recommendations.
- Meet a general audience in the "middle".



# Break out group 1

- In your groups briefly discuss the following questions.
- Have your group recorder write your answers on your sticky note and post it to the Miro board.
- Two answers minimum per group.
- 2 minutes to brainstorm per question.





# Why do Interpretations, Explanations, and Recommendations fail?



### Procrastination



# The Confidence Paradox : You lost your audience

#### Symptoms:

- Blank Stares
  - Crickets
- No Questions



In a classroom or in a presentation these are all signs that there is an explanation disconnect

Your audience isn't confident in your explanation

Your audience isn't confident in their understanding

Your audience isn't confident they can even make it to the end of your explanation

- Lack of confidence in their tools to engage
- They no longer care about the content

In a report or article we can't see the confidence paradox in real-time, but you will see it in reviews, critiques, citations, and news/media coverage of your article



## From: The Art of the Explanation by Lee LeFever

# The Knowledge Curse

The more we know the harder it is to remember what its like to not know.



## The Knowledge Curse

Assumptions	<ul> <li>About what our audience knows</li> </ul>
Status	<ul> <li>Use large words, complex phrases, or reference obscure theory to appear knowledgeable</li> </ul>
Our own knowledge	<ul> <li>We may not know enough yet to be able to explain the idea clearly to others</li> </ul>
Vocabulary	<ul> <li>We use technical terms or jargon without providing definitions</li> </ul>
Context	<ul> <li>Fail to provide background information necessary to meet your audience where they are at</li> </ul>



# How do we design and deliver better interpretation?

Step 1: Plan your explanation

January 2022 DTU Environment



How do you plan your explanation?

# Visualize the knowledge gap.

# What questions will you answer in your LCA?

#### Check: knowledge, assumptions, vocabulary, context

- 1. Draw a scale and number it 1 through 10. (1 = less and 10 = more understanding)
- 2. Write the question you are answering at the top of the page.
  - What impact does contamination have on plastic sorting?

#### 3. Knowledge check: Place yourself on that scale.

- How confidant are you in your own understanding of your answer to this question?
- "I'm not a teacher: only a fellow traveler of whom you asked the way. I pointed ahead— ahead of myself as well as you." George Bernard Shaw

#### 4. Assumption check: Place your audience on that scale.

- Intended Audience How far away are they on the scale from you? Are they in front of or behind you?
- General Audience How far away are they on the scale from you? How big is the knowledge gap?

#### 5. List the vocabulary you will need to answer the question.

- Place each of the words on the scale?
- What do you expect your audience to know? What will you need to define?

#### 6. List the context you need to answer the question.

- Place each of these ideas or concepts on the scale?
- What do you expect your audience to know? What will you need to define?



The Knowledge Scale

# Group Example

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#### Check: knowledge, assumptions, vocabulary, context

- 1. Draw a scale and number it 1 through 10. (1 = less and 10 = more understanding)
- 2. Write the question your LCA is answering at the top of your page.

#### 1. Knowledge check: Place yourself on that scale.

• How confidant are you in your own understanding of the case study to this question?

#### 2. Assumption check: Place each audience on that scale.

- Intended Audience How far away are they on the scale from you? Are they in front of or behind you?
- General Audience How far away are they on the scale from you? How big is the knowledge gap?
- 3. Is there any vocabulary from the case study you will need to answer the questions from your audiences? If so list the vocabulary you will need to answer the question.
  - Place each of the words on the scale.
  - What do you expect your audience to know? What will you need to define?

#### 4. List the context you need to answer the question.

- Place each of these ideas or concepts on the scale.
- What do you expect each audience to know? What will you need to define?



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## Tools

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- <u>https://www.klipfolio.com/resources/articles/what-is-data-visualization</u>
- <u>https://datavizcatalogue.com/index.html</u>
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