

Applied Learning through Threshold Concepts

Name :Dr.C.V.K.Bhanu

Email :bhanucvk@gvpce.ac.in

Threshold Concept: Distributed Generation Vs Centralized Generation

Transformative: Changes the learner's view from centralized to decentralized energy models.

Troublesome: Challenges conventional thinking about grid stability, reliability, and energy policy.

Integrative: Brings together concepts from electrical engineering, environmental science, and policy.

Already Known to the students:

Renewable Generation and Centralized Generation

Yet to be known by the students:

Distributed Generation, Environmental impacts of present generation technologies.

Comparison of Case Studies:

Fink's Taxonomy	Bloom's Taxonomy	SOLO Taxonomy
Foundational Knowledge(Background)	Background	Background
Application (Scenario)	Remembering	Pre-structural (<i>No or minimal understanding</i>)
Integration (What you observe)	Understanding	Uni-structural (<i>One aspect understood</i>)
Caring (Why it matters)	Applying	Multi-structural (<i>Several aspects known but not connected</i>)
Human Dimension (You reflect)	Analyzing	Relational (<i>Links between aspects are understood</i>)
Learning how to learn (Your task)	Evaluating	Extended Abstract (<i>Generalizing, predicting, or creating new ideas</i>)
	Creating	

Reflective questions based on the Bloom's Taxonomy for the case study:

1. Understanding (Level 2 – Comprehension)

How does the distance between the power source and users affect the efficiency and reliability of electricity supply in Pineville?

2. Analyzing (Level 4 – Analysis)

Compare the environmental and social impacts of the existing coal-based power supply with the proposed local solar solution for Pineville. What are the key differences and why do they matter?

3. Evaluating (Level 5 – Evaluation)

If you were a Pineville resident, would you support switching to a local solar power system? Justify your answer with reasons related to cost, environment, and daily life.