

IBMA Meeting



CONCEPT-BASED TEACHING AND LEARNING
APRIL 9, 2013

Objective



**TO EXPLORE THE CURRICULUM DESIGN AND
IDENTIFY IMPORTANT CONCEPTUAL
UNDERSTANDINGS OR BIG IDEAS THAT HELP
STUDENTS USE THE DISCIPLINE TO MAKE
SENSE OF THE WORLD IN INFORMED WAYS**

The Short and Incredibly Happy Life of Riley



- In groups construct the understanding of the story when viewed through the assigned concept. Use a graphic organizer to present findings, what related concepts may you have used too.
- How did the conceptual lens change the focus of the story?
- How can you bring conceptual understanding to your grade level/discipline?

The Short and Incredibly Happy Life of Riley



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Pick A Conceptual Lens



Conflict	Beliefs/Values	Interdependence	Freedom	Identity
Relationships	Change	Perspective	Power	Systems
Structure/ Function	Design	Heroes	Force	Complexity
Paradox	Interactions	Transformations	Patterns	Origins
Revolution	Reform	Influence	Balance	Innovation
Creativity	Utility	Genius		

Think about this statement...



Intelligence does not operate in a vacuum. Our senses, emotions, physical environment, and environmental context all play a critical role in the development of intelligence.

To what extent do you agree with this statement?

So, why....



In spite of the dedicated time and tireless efforts of teachers to teach and reteach year after year...why are children unable to retain, transfer, and understand knowledge?

Who are we developing????

communicators . . .

leaders . . .

creators . . .

critical thinkers . . .

self-directed workers?



21st century

Synergy and Curriculum:

Which picture best represents the relationship between synergy and curriculum?

A.



B.



C.

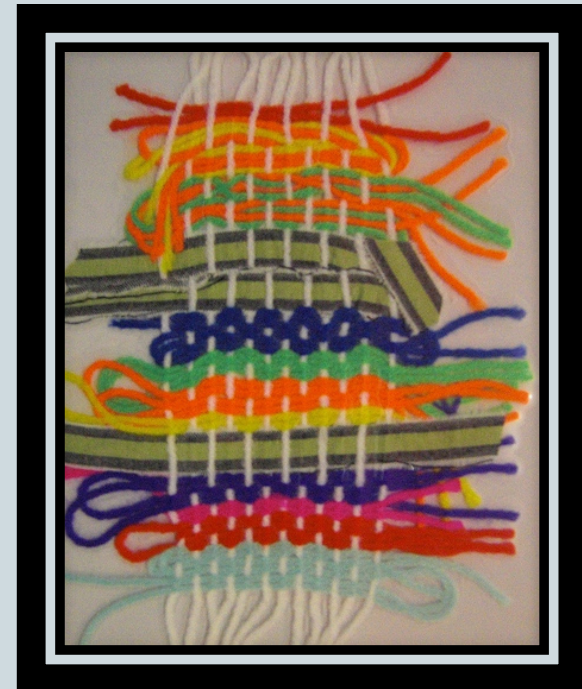


Synergy



- To stimulate more sophisticated, complex thinking, we need to create synergy between the simpler and more complex.
- This interactive synergy requires the mind to process information on two cognitive levels. The factual and conceptual.
- The conceptual mind uses facts as a tool to discern patterns, connections, and deeper, transferable understandings.

So.....to what extent do we see curriculum materials designed in this systematic way to support this type of thinking.



Synergy



- Students retain the factual information longer because the use of the conceptual lens requires them to intellectually process at a deeper level.
- Students are invited to bring their own thinking to the factual study, they are better able to make personal meaning.
- This invitation involves them emotionally- they are personally invested- and the motivation for learning increases.

3D Instruction

● Reflect

3 DIMENSIONAL INSTRUCTION

"Effective concept-based teachers in IB programmes understand the principles of synergistic thinking, the transfer of knowledge and socially constructed meaning-making. They have at some point made the following pedagogical shifts in their instruction if they began their teaching career in a traditional two-dimensional model."

Concept Based Teaching and Learning, an IB Position Paper by Lynn Erickson

- Where is your school in the journey to 3D Learning and Teaching?
- What will it take your faculty to reach comfortable levels of 3D instruction?
- What will take you there?



3 D LEARNING	JUST STARTING	WORKING ON IT	IN PLACE
The goal is increased conceptual understanding supported by factual knowledge and skills, and the transfer of understanding across global contexts.			
Teacher facilitates student inquiry into important interdisciplinary and disciplinary topics and issues using one or two key concepts as the conceptual draw.			
Instruction and learning experiences utilize concepts along with factual content to ensure synergistic thinking. Teacher deliberately uses concepts to help students transcend the facts.			
Teacher posts questions of different kinds (factual, conceptual, debatable) to engage interest and to facilitate synergistic thinking.			
Students often work in groups to facilitate shared social inquiry, collaboration, synergistic thinking and problem-solving. Students may work independently, in pairs or groups, or across global contexts using the internet or other communication tools.			
Teacher uses inductive teaching to draw the statement of conceptual understanding from students near the end of a lesson and posts the central or suggested supporting ideas for later connections to future topics in the curriculum. Students support their understanding with accurate facts as evidence of quality synergistic thinking.			
Assessments of conceptual understanding tie back to a central (or supporting idea) by incorporating specific language from the idea in the task expectations.			
Teacher focuses on student thinking and understanding. He/she is cognizant of each student's ability to think synergistically.			

Concept Based Teaching and Learning



Claim/Support/Question

1. Make a <u>Claim</u> about the work	Claim: An explanation or interpretation of the work
2. Identify <u>Support</u> for your claim	Support: Objective things you see, feel, or know what support your claim.
3. Ask a <u>Question</u> related to your claim	Question: What's left hanging? What isn't explained? What new reasons/questions does your claim raise?

	Reflection
Claim	
Support	
Question	

Try this...



Think of two topic from your curriculum.

- Choose potential lenses from the list for each topic
- Notice how the lens changes the focus for thinking about the topic.
 - ✦ Which lens do you find most engaging (or challenging) for your topic?
- Now think...How does that lens invite students (and yourself) to bring personal intellect to the study?

View From 3D

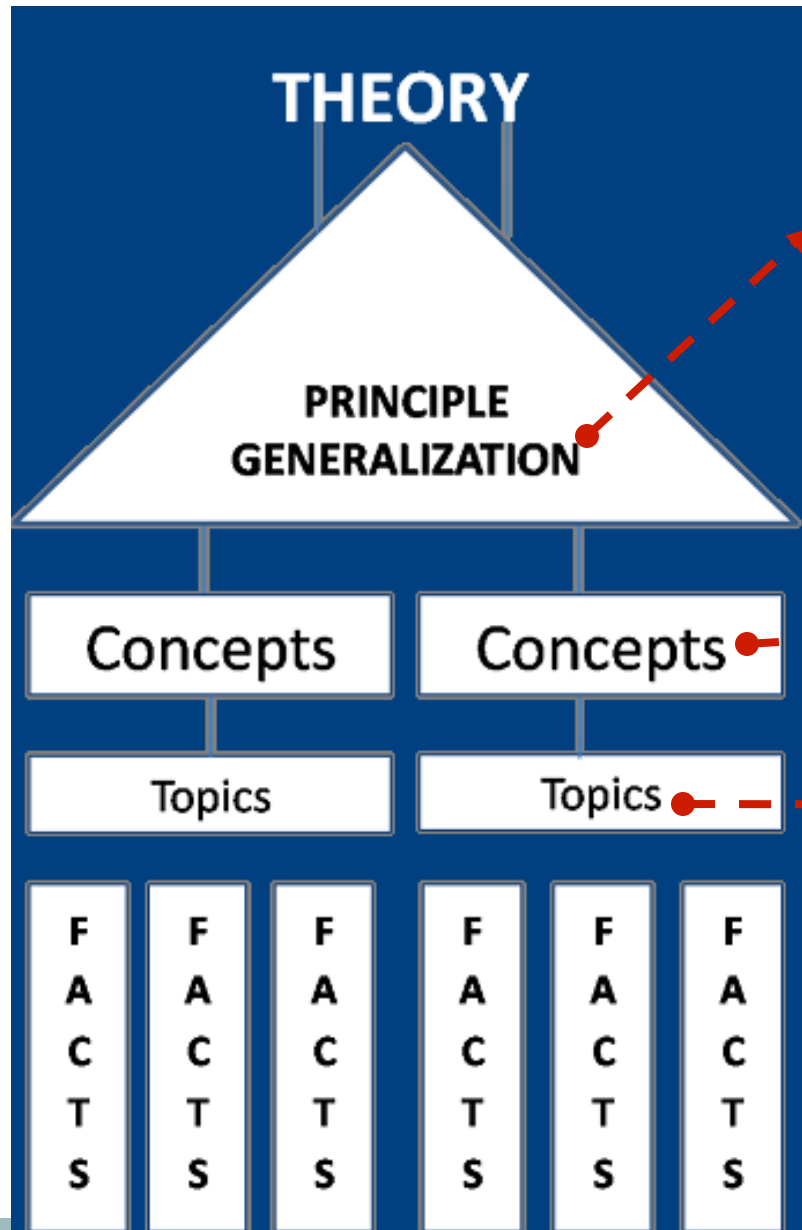
From two-dimensional instruction*	To three-dimensional instruction
The goal is increased factual knowledge and skill development.	The goal is increased conceptual understanding supported by factual knowledge and skills, and the transfer of understanding across global contexts.
Teacher relies heavily on lecture to disseminate factual knowledge.	Teacher facilitates student inquiry into important interdisciplinary and disciplinary topics and issues using one or two key concepts as the conceptual draw.
Instruction and learning experiences focus on factual examples and definitions of concepts with assumed conceptual understanding.	Instruction and learning experiences utilize concepts along with factual content to ensure synergistic thinking. Teacher deliberately uses concepts to help students transcend the facts.
Teacher posts objectives for each lesson as required.	Teacher posts questions of different kinds (factual, conceptual, debatable) to engage interest and to facilitate synergistic thinking.
Students face the teacher in straight rows to ensure order and attention to the teacher's instruction.	Students often work in groups to facilitate shared social inquiry, collaboration, synergistic thinking and problem-solving. Students may work independently, in pairs or groups, or across global contexts using the internet or other communication tools.
Teacher verbally summarizes the learning related to the objectives at the close of the lesson.	Teacher uses inductive teaching to draw the statement of conceptual understanding from students near the end of a lesson and posts the central or suggested supporting ideas for later connections to future topics in the curriculum. Students support their understanding with accurate facts as evidence of quality synergistic thinking.
Assessments measure factual knowledge and skills.	Assessments of conceptual understanding tie back to a central (or supporting idea) by incorporating specific language from the idea in the task expectations.
Teacher focuses on covering the required curriculum.	Teacher focuses on student thinking and understanding. He/she is cognizant of each student's ability to think synergistically.

*The two dimensional model is exaggerated in this paper to provide a clear contrast with the three-dimensional model.

Pick A Conceptual Lens



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The Structure of Knowledge

The student understands that... **3.**

2.

Four dashed boxes representing intermediate knowledge levels.

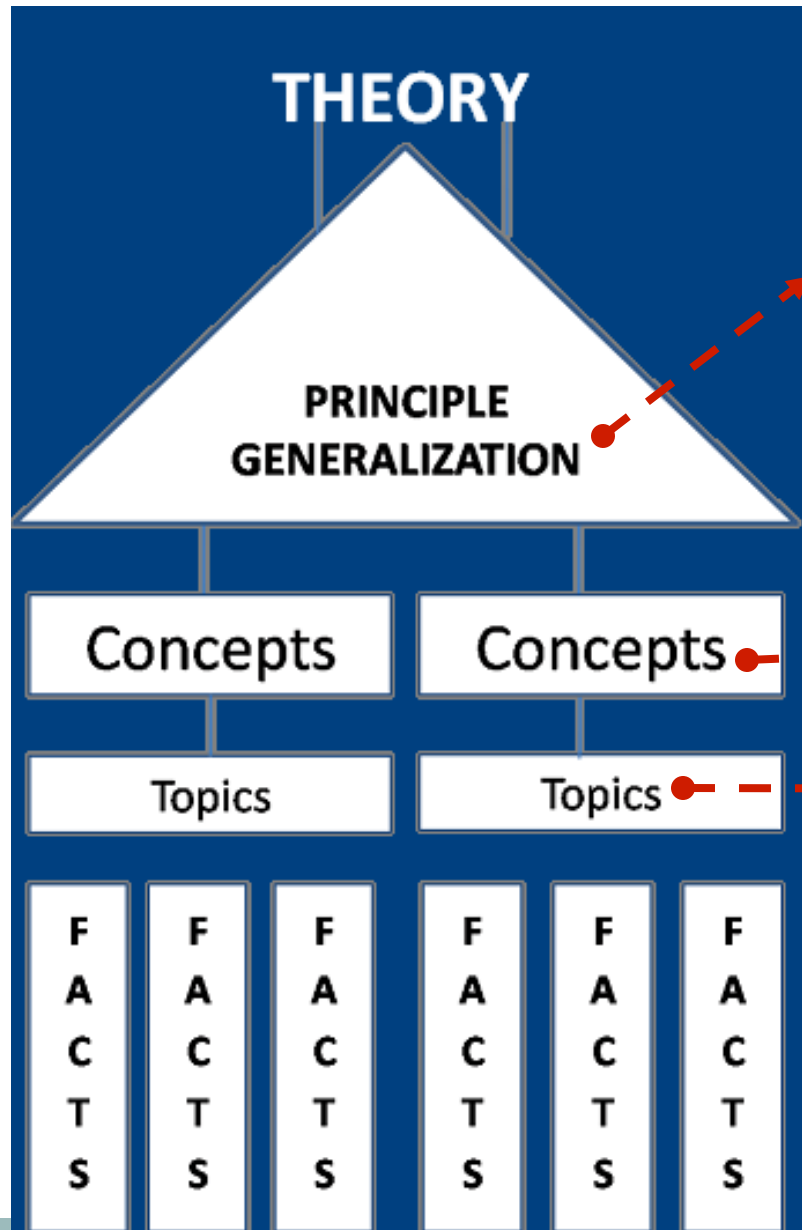
1.

A solid yellow box representing the final knowledge level.

The Integration of Thinking



- When we can rise above the facts and see patterns and connections between the facts and related concepts, principles, and generalizations- and when we can understand the deeper, transferable significance of knowledge- then we can say that our thinking is integrated at a conceptual level.



The Structure of Knowledge

The student understands that...strong **emotions** can alter the **dynamics** of a **relationship**.

3

• Relationships • Emotions • Behaviors

2

► Romeo and Juliet

1

References



- Erickson, L., (2010) Stirring the Head, Heart and Soul with the concept based curriculum.