

Synectics Teaching Model

Description

Process

Purpose

Context

Examples

Description

A “metaphor/analogy-based techniques for bringing different elements together in a search for new ideas or solutions.” 6, 7, 8, 15

A way to connect “apparently irrelevant elements of thought” to “spark surprising new ideas.” 15

A brainstorming tool that produces new perspectives in independent and cooperative learning. 4

“Through a series of group and individual exercises, students play around with analogies until they make connections that don’t seem logical at first...” the “synergistic process...breaks left-brain dependence on old frames of reference...” 7

Types of analogies commonly used: (1) fantasy, e.g., how to move a sleeping cow from a playground; (2) direct analogy, e.g., compare moving the sleeping cow to how cranes carry heavy loads; (3) personal analogy, e.g., imagine yourself as the sleeping cow in the playground and you want to move to a quieter place without losing sleep – what would you do? 15

Note: In one study, students ranked synectics as one of the top “preferred” instructional models. 5

Process

Process in the classroom leads students to: (1) describe the topic, e.g., music; (2) create direct analogies, e.g., how are music and bias alike? (3) describe personal analogies, e.g., how would it feel to be music that is biased? (4) identify compressed conflicts, such as, pair words from the music and bias list that seem to fight each other, e.g., how are auditory symbolism and personal inclination different? (5) create a new direct analogy, such as selecting something that is described by the paired words, e.g., how are auditory symbolism and personal inclination like a painting, poem, movie, political party, etc.? (6) re-examine the original topic and produce a product or description that uses the ideas generated in the process. 15

Students follow “six synectics modeling steps: (1) topic description, (2) direct analogies, (3) personal analogies, (4) compressed conflicts, (5) new direct analogies, and (6) topic rewrite...the equivalent of six 50-minute sessions is usually adequate for a training period...”7

Usually in groups, students use metaphorical analogies to stimulate creative thought. Stages are: (1) describe the topic, (2) create direct analogies, (3) identify compressed conflicts (concepts/words that seem to be oxymorons or seem to contradict each other, e.g., “ordered” and “chaotic”), (4) create a new direct analogy, (5) reexamine the original topic, (6) evaluate. 3

Phases include “problem statement; creative thinking (spring boarding); selection based on novelty and intrigue; idea development (to build feasibility into the ideas); and action planning.” 10

Requires sufficient opportunity for practice and transfer of training. 13

Purpose

Produces insight 3, 6

Promotes recall and retention of content 8

Promotes problem-stating and problem solving 10

Produces practical problem solving with creative solutions 14

Encourages divergent thinking 6

Develops new/multidimensional perspectives and frameworks for thinking 4, 8

Fosters reorganizing of thinking and concept formation 1

Enhances creative thought 2, 3

Challenges thinking 5, 7, 8

Stimulates exploration, comparison of elements, identification of ideas 3

Stimulates identification of similarities and differences in ideas

Enhances personal flexibility and creativity 8

Joins together “different, apparently irrelevant elements” 10

Makes “the unfamiliar, familiar” 5

Avoids dysfunctional group behaviors 14

Contexts

Used in:

faculty development 8

business settings 6, 13, 14

creativity training (business) 13

management training (business) 14

marketing 10

research organizations 6

“think tanks” 6

engineering 9

history 11

science 12

writing 7

bilingual education 8

online/distance learning 5, 6

threaded discussions 6

Examples

Students reflect and discuss topic, write two paragraphs, after which they list words on the board, create direct analogies between the list on the board and a seemingly unrelated category (machines), then view topic from the metaphor selected (from machines category), then express how it feels, then list feeling words, then discover compressed conflicts by joining words that seem to fight each other, then re-examine the process and create a new product, then discuss and evaluate with the whole class. 3

Assign a topic or description such as a sport, concept, object, process, celebrity, or character. Instruct students to write about the topic. Encourage them to write anything that comes to mind. Set a 10-minute time limit and 1-page minimum. Require pens and pencils to start moving immediately. After time, ask students for words used to describe the topic, for a minimum of number of words equal to number of students. Then introduce an unrelated category, e.g., baseball and write key words (or plants, animals, machines, technologies, minerals, chemicals – anything unrelated to the original topic) and invite students to call out words that seem related to different types of machines. This forces student to leave the “left-brain” logic and enter “right-brain” thinking. This explores intentional use of direct analogies; e.g., types of machines (students are generating the list from their own ideas – the words aren’t given to them, just the category). They are given time to connect personally with the metaphor they’ve generated, then explore emotions, feelings, explanations of reasons for selecting the metaphor (in this example, from the machine category). Students then use the “feelings” list of words to combine the ones that “seem to argue with each other.” They call out their key words and any words outside of the combinations are erased, leaving only the “compressed conflicts” list. Students next create new direct analogies from one of the “compressed conflict” combinations. Leave at least the top three choices on the board. Then require students to rewrite the original topic.” 7

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