

Developments in Business Simulation & Experiential Exercises, Volume 13, 1986

DEVELOPING THE COMPETENCIES OF "CREATIVITY" AND "ACCURATE SELF-ASSESSMENT"

Donald S. Kline, Bloomsburg University

ABSTRACT

This paper presents an experiential exercise designed to permit students to: (1) individually experience a "warm-up" process attempting to solve selected "brain-teasers" and puzzles; (2) become aware of eight conceptual "blocks" which serve to inhibit the creative problem-solving process by, as a group, solving a puzzle or problem; (3) become familiar with a number of techniques or "blockbusters" which serve to aid both the definition of the problem and the listening of alternative solutions; and (4) solve, as a group, a problem which is stated in nonsense language terms.

INTRODUCTION

George A. Steiner, long an astute student of management, has on several occasions, commented on the management curriculum and how it must adapt to changing external forces. In an article entitled "Future Curricula in Schools of Management" [1] he listed several "forces" at work for change in the management curriculum. Seven were listed but two are centrally relevant to this paper: (1) rising pressure to educate and train "problem finders" in addition to "problem solvers" and (2) expanding requirements to include, in curricula, studies relating to how managers can become more innovative, creative, and entrepreneurial in behavior.

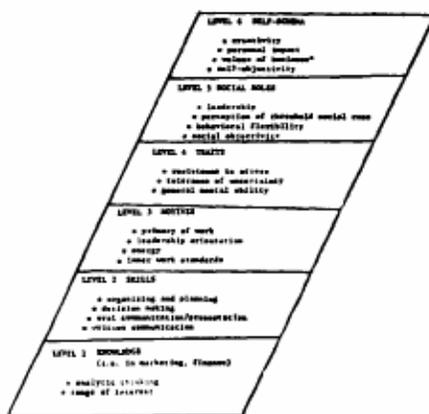
During the late 1970's and early 1980's both the American Assembly for Collegiate Schools of Business (AACSB) and the American Management Association (AMA) were developing distinct yet similar models of a competency-based approach to business and management education, training and development.

The AACSB model-in Phase I of work by the Accreditation Research Committee-listed twenty non-cognitive attributes or competencies. Figure 1 shows a competency defined as a

generic knowledge, skill, trait, motive, social role, or self-schema. It also shows the competencies arrayed as a hierarchy grouped into six clusters, and defined on a preliminary basis. One of the competencies at the level of "self schema" is creativity. Creativity is defined as "generating and/or recognizing imaginative problem definitions, solutions and innovations in work-related situations."

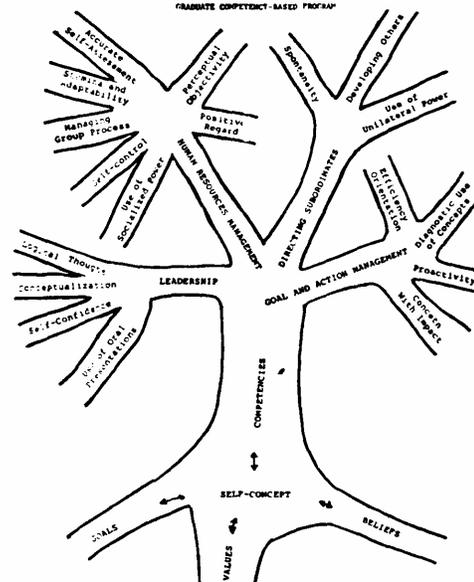
A second model, developed by the AMA, serves as a base for the graduate management competency-based program taught in New York City to middle and top level managers. As can be seen in Figure 2, the competency of accurate self-

FIGURE 1
A LAYER OF COMPETENCY LEVELS
(BASED UPON AACSB PHASE I ACCREDITATION REQUIREMENTS)



* "largely nonverbalized" but needing to evolve to "verbalized."
See: Clark Grawe, "Levels of Existence: An Open System Theory of Values," *Journal of Humanistic Psychology*, Fall 1980, Vol. 18, No. 3, pp. 321-330.

FIGURE 2
THE AMERICAN MANAGEMENT ASSOCIATION
GRADUATE COMPETENCY-BASED PROGRAM



assessment is part of the cluster labeled human resources management. Accurate self-assessment is defined by the AMA as "the ability to appraise one's strengths and weaknesses realistically."

Creativity and the need to realistically assess one's own potential for creative problem-solving and problem-finding is part of the total self concept of a person. Figure 2 shows the competencies of the AMA model via the analogy of a tree. The root system is self-concept, the trunk is competencies, the two lateral roots are goals and beliefs and the "taproot" is values of the manager.

The competency of creativity deals, to a very large degree, with the functioning of the human brain. Problem solving is usually viewed as a process which is linear, quantitative, and logical. In a right-handed person, this is the left hemisphere at work. But problem-finding (see Steiner op. cit.) draws upon intuition and judgement and definitional languages other than verbal. In a right-handed person this is, to a large degree, the right hemisphere at work.

Until very recently, little attention has been paid to the Issue of creativity in management and business cur-

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ricula. At the graduate level, Stanford University has introduced an elective course called "Creativity in Business". The course draws upon a wide range of techniques, materials, and pedagogies which would seem to be quite alien to traditional courses and curricula in business and management programs, departments and schools. Some examples of the techniques! pedagogies used are: Zen, I Ching, the drawing of mandalas, Eastern relaxation techniques, body movement, dream analysis, and the listening to Hindu music.

The literature of creativity is vast and "cuts across" the fields of psychology, Eastern religion, Western theology, philosophy, physiology. Some references pertaining to the standard approaches to creativity and creative problem-solving are:

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AN EXPERIMENTAL EXERCISE

DEVELOPING THE COMPETENCIES OF "CREATIVITY" AND "ACCURATE SELF-ASSESSMENT"

Goals

1. To individually experience a "warm-up" process of attempting to solve selected puzzles and "brain-teasers:
2. To become aware of eight conceptual "blocks" which inhibit the creative problem-solving process
3. To attempt, as a group, to learn more about a particular conceptual block and to attempt to solve a puzzle or problem.
4. To become familiar with a number of techniques or "blockbusters" which serve to aid both the definition of a problem and the listing of alternative solutions
5. To solve, as a group, a problem which is stated in nonsense language terms

Group Size

Any size from 3 to 10, ideally from 4 to 6.

Duration

About one hour.

Materials Needed

1. A fifty-item questionnaire on creativity diagnosis
2. Mini-exercise - Twenty Brain Teasers (Appendix I)
3. Mini-exercise on Hocus Focus (choice of football or shopping) (Appendix II)
4. Information sheet listing and defining eight conceptual "blocks to creative problem solving (Appendix III)
5. Additional data package relating to one of seven of the conceptual "blocks" listed in (4) above. The package contains additional information on a specific conceptual block and a puzzle or problem to be solved.
6. General information sheet on six conceptual "blockbusters"
7. Instruction sheet and data card sets for exercise-Lutts and Mipps (Attachment G)

Process

1. Prior to the exercise the student is given a fifty-item self-diagnostic creativity questionnaire. The questionnaire is to be completed as honestly as possible and brought to class the day of the exercise.
2. At the beginning of the exercise, the fifty-item questionnaire is scored for creativity "readiness".
3. The instructor hands out a mini-exercise consisting of twenty "brain teasers". Each individual student is asked to solve as many of the brainteasers as possible within a three minute time period. Answers are to be recorded on the exercise sheet. Scoring of "correct" answers is done collectively by the class.
4. Individual students are asked to select one of two "Hocus-Focus" puzzles and solve it within a one-minute period.
5. An information sheet is handed out to each student containing a list of eight conceptual "blocks" which serve as barriers to creative problem solving.
6. After a brief discussion, the group decides on which specific conceptual block (with the exception of number 7) it would like to learn more about.

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7. A group member obtains a data package from the instructor corresponding to the specific conceptual block the group wants to investigate. The data package contains additional information about the specific block and a puzzle or problem to be solved by the group (see Appendix IV for a sample data package pertaining to #2 Use of Only One Thinking Language).
8. Each individual student is given an information sheet on conceptual "blockbusting". The sheet contains a description of three principles for improving problem definition and three principles for improving the generation of alternative solutions.
9. Groups are instructed to sit in a circle of chairs facing one another.
10. A volunteer for each group comes up to the instructor to pick up a package of material consisting of (a) a Lutts and Mipps instruction sheet and (b) a set of 3 x 5 data cards.
11. The volunteer "deals" all of the data cards around the circle. Each group member ends up with a "hand" of data cards-some more than others depending upon the size of the group.
12. The group attempts to complete the Lutts and Mipps exercise within a fifteen-minute time period.
13. The instructor explains the solution to the Lutts and Mipps problem.
14. An open discussion takes place with regard to conceptual blocks which may have impeded the group from reaching a solution or conceptual blockbusters which may have aided the group in reaching a solution.

NOTE: The exercise will be presented but not demonstrated.

APPENDIX I

BRAIN TEASERS

1. 
2. MAN BOARD
3. STAND I
4. |R|E|A|D|I|N|G|
5. WEAR LONG
6. $\frac{R}{A}$ ROAD
7. \downarrow
8. 
9. LE VEL
10. $\frac{1}{2}$
11. KNEE LIGHT
12. 
13. CHAIR
14. 
15. \downarrow
16. 
17. 
18. 
19. ECNALG
20. MATH LIFE

APPENDIX II



HOCUS-FOCUS



CAN YOU TRUST YOUR EYES? There are at least six differences in drawing details between top and bottom scenes. How quickly can you find them? Check answers with those below.

APPENDIX III

Conceptual Blocks That Inhibit Problem Solving

1. Vertical thinking—Beginning with a single definition and pursuing problem resolution without considering other possible definitions.
2. Only one thinking language—Thinking about a problem only in words, for example, instead of visually, symbolically, emotionally, etc.
3. Past experience that cause stereotyping—Considering present problems only as variations on problems faced in the past.
4. Separating figure and ground—Not deleting irrelevant information and filling in needed information that is absent.
5. Artificially constraining problems—Defining the boundaries of problems too narrowly.
6. Not perceiving commonalities—Failing to see relationships between disparate elements.
7. Lack of inquisitiveness—Fearing to appear ignorant if questions are asked.
8. Bias against thinking—Tending to be active at the expense of solitary thought time.

APPENDIX IV

Use of Only One Thinking Language

A second conceptual block to problem solving is thinking about a problem using only one "language." Some people think in terms of words—when they think about a problem and its solution in terms of verbal language. Some writers, in fact, have argued that thinking cannot even occur without words (Vygotsky, 1962). Other thinking languages are available, however, such as non-verbal languages (e.g., mathematical, sensor's fingers) or meaning or tactile movement (language and movement, e.g., lipograms, but an object and word imagery (e.g., mental pictures). The more languages available to problem solvers, the better and more creative will be their solutions. As Steiner (1987) puts it, "Verbal language can become a screen which occludes language, the hidden and reality. This is the reason that your creativity will never where [verbal] language ends."

I ask you to focus on this. Try some of this.



I also tell you that in the set you have just observed are three vital elements: eyes and one person. You ask, "What the hell is a 'vital' eye?" I reply, "That's the game. You ask so to tell me what a 'vital' eye is and what person are. Do you know your dice again and tell me how many eyes and how many people you come up with that set?" Do you know again and the time the dice tell the die.



Now have many eyes are there? How many people? The right answer the time is that there are two 'vital' eyes and one person. You ask, "What the hell is a 'vital' eye?" I reply, "That's the game. You ask so to tell me what a 'vital' eye is and what person are. Do you know your dice again and tell me how many eyes and how many people you come up with that set?" Do you know again and the time the dice tell the die.



Steiner, G. *The Art of Creative Thinking*. New York: Dell, 1987.

Vygotsky, L. *Thought and Language*. Cambridge, MA: MIT Press, 1962.

REFERENCES

- [1] Steiner, George A. "Future Curricula in Schools of Management," *AACSB Bulletin*, Oct., 1976, pp. 5-11.